MEDICAL IMAGING
CSO Customer Support Operations

Technical Documentation

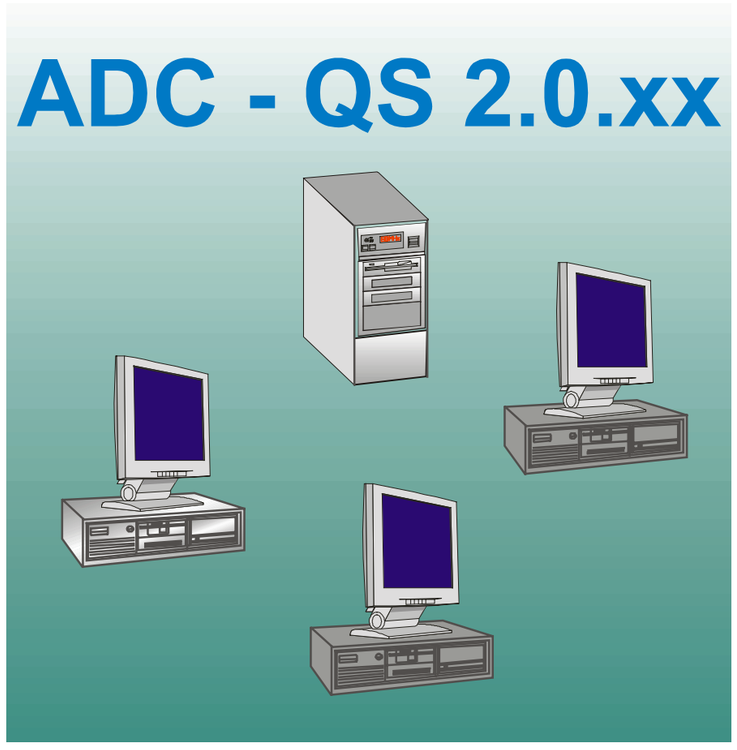
Order No.: DD+DIS244.01E

1 Piece UR782 MA1

ADC Quality System

Type 4406/421

1st edition



To order spare parts and spare part assortments:	**Tel.:**	**xx49 - (0)89 - 6207 – 3760**
	Fax.:	**xx49 - (0)89 - 6207 – 7388**
To order documentation:	**Tel.:**	**xx49 - (0)89 - 6207 - 3553**
	Fax.:	**xx49 - (0)89 - 6207 - 7271**

Caution:

This system uses high voltage. Please consider the respective safety regulations.

These instructions describe adjustments and routines which must only be performed by qualified technical personnel.

Note:

Electrical repairs and connections must only be performed by a qualified electrician.

Mechanical repairs and connections must only be performed by a qualified technician.

CE Declaration:

The CE Declaration (CE Conformity) becomes invalid if the product is changed without explicit consent of the manufacturer!
This applies to all parts, not only to safety elements.

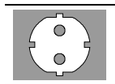
AGFA-GEVAERT AG - MI CSO / Information & Projects
Tegernseer Landstr. 161 D-81539 München

printed in Germany 11 / 2001

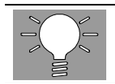
AGFA

OVERVIEW

0. Order List



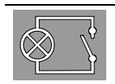
1. Controls, Connections and Set Up Procedures



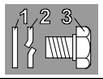
2. Functional Description

3. Repair and Service

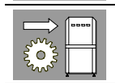
3.1 Machine specific safety and repair information
3.2 Machine specific tools, software tools and auxiliary equipment
3.3 Troubleshooting
3.4 Electrical and mechanical codes, fuses, LED's
3.5 Replacement of parts
3.6 Adjustments and calibrations
3.7 Software menus, settings
3.8 Software-Releases, Patches
3.9 **F**requently **A**sked **Q**uestions



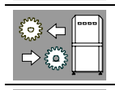
4. Reference and Circuit Diagrams



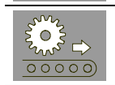
5. Spare Parts List



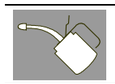
6. Accessories



7. Field Modifications

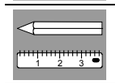


8. Manufacturing Standard Modifications



9. Maintenance

10. Field Service Bulletins



11. Installation Planning

12. Glossary and Key Word Index

Pictograms and conventions for this documentation

This documentation uses certain conventions (pictograms, way of writing) for better understanding and faster locating of the required information.

Explanation of the pictograms

High voltage !

Attention !

Info

Hint

Required spare part

Required time

Waiting time

Required tools

Removal

Installation

Mechanical adjustment

Electrical adjustment

Calibration

Conventions

Actions	Way of writing	Sample
Action, explanation	Switch the machine on	Switch the machine on
Action with the mouse or the "Return" key	`<omni-cd.exe>`	Double-click the `<omni-cd.exe>` icon
Required text input via the keyboard	`vips`	Enter `vips` and click on `<Continue>`

MEDICAL IMAGING

CSO Customer Support Operations

Technical Documentation

Order No.: DD+DIS244.01E

1 piece UR782 MA1

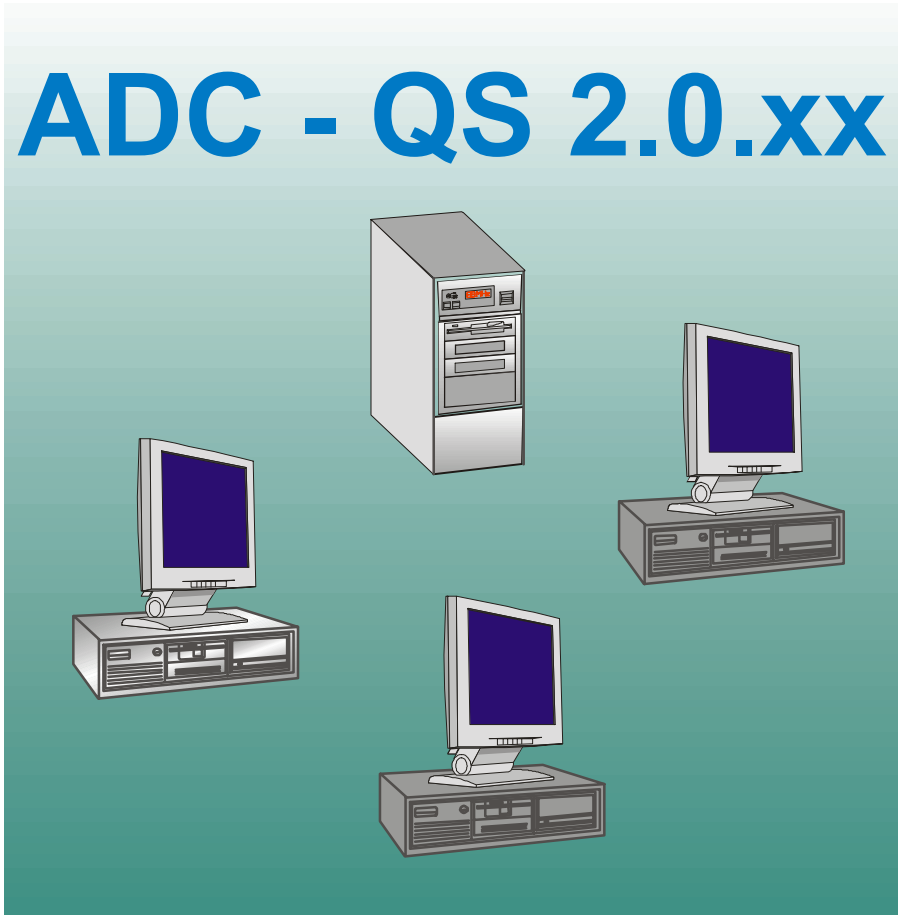
ADC Quality System

Type 4406 / 421

This Technical Documentation describes the ADC Quality System version 2.0.xx:

- ADC QS Server Station
- ADC QS Client Station

1st edition



printed in Germany 11 / 2001

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ADC Quality System 2.0.xx

Type 4406/421

The enclosed Order List replaces all previous versions. Take the previous version from your Service Documentation and file the enclosed Order List in your Service Documentation front of Chapter 1.

The complete Service Documentation may be ordered by specifying the respective order number or the machine name via:

Telephone: xx49 - (0)89 - 6207 - 3553
Fax: xx49 - (0)89 - 6207 - 7271

Edition	Revision	Order Number	Contents
1	2	DD+DIS244.01E	Complete Service Documentation in a folder This documentation includes all the previously published documentation

To obtain the overall information of the ADC System in use, please refer to the documentation of the respective digitizer as well.	
ADC Compact (2nd Edition)	DD+DIS197.00E
ADC Compact Plus (1st Edition)	DD+DIS024.01E
ADC Solo (1st Edition)	DD+DIS231.98E

List of all Supplements:

Upon requirement all supplements can be ordered again individually by the respective order numbers.
When you order a supplement, the enclosed order list may already be outdated by another supplement. In this case keep the one with the higher revision number in your Service Documentation.

Edition	Revision	Order Number	Contents
1	1	DD+DIS277.01E	Software Installation Instructions for ADC QS 2.0.09
1	2	DD+DIS024.02E	Integration of Touch Screen in ADC Quality System

The following chapters of the documentation may be ordered separately:

Edition	Revision	Order Number	Contents
1	0	DD+DIS177.00M	Chapter 05: Spare parts list, 1st Edition
1	0	DD+DIS248.01E	Chapter 07: Installation Instructions for Upgrade to ADC QS 2.0.08
1	1	DD+DIS277.01E	Software Installation Instructions for ADC QS 2.0.09
1	2	DD+DIS024.02E	Integration of Touch Screen in ADC Quality System
1	0	DD+DIS249.01E	Chapter 09: Maintenance instructions, 1st Edition
1	0	DD+DIS250.01E	Chapter 11: Installation Planning, 1st Edition

Order List for Documentation

The following Field Service Bulletins have been published until now:

The FSBs No. xx - yy published before, have been integrated in the Service Documentation, xth Edition and are thus obsolete.

FSB	Order Number	Contents
No. 1	DD+DIS276.01E	New SW ADC QS 2.0.09 available now
No. 2	DD+DIS262.01E	PRID 1.2.11 Software available now

Service Documentation for this machine is also available on CD.

OMNI CD:

- The OMNI CD is published every three months always at the beginning of the quarter.
- The Munich Warehouse always sends the newest release.

Explanation of the order number:

DD+OMNI-MI-.. this part of the order number always remains the same. The two following numbers indicate the release number.

Example: You have Release 09 with order number: DD+OMNI-MI-**09**
You order now the next higher release with order number: DD+OMNI-MI-**10**

Checklist for Completeness

ADC Quality System 2.0.xx (Type 4406/421)

Chapter	Edition	Revision	Order Number / Designation	Pages
0	1 1 1 1	0 2 2 2	DD+DIS244.01E Order list Checklist for Completeness General information	Cover sheet and list of contents (A3) 0/1-0/2 0/3 0/4
1	1	0	DD+DIS244.01E	1/I, 1/1-1/12
2	1	0	DD+DIS244.01E	2/I, 2/1-2/27
3.1	1	0	DD+DIS244.01E	3.1/I, 3.1/1-3.1/2
3.2	1	0	DD+DIS244.01E DD+DIS245.01E DD+DIS246.01E	3.2/I, 3.2/1-3.2/9 3.2/1 3.2/I, 3.2/1-3.2/14
3.3	1	0	DD+DIS244.01E	3.3/I, 3.3/1-3.3/6
3.4	--	--	--	--
3.5	1	0	DD+DIS244.01E	3.5/I, 3.5/1-3.5/4
3.6	1	0	DD+DIS244.01E	3.6/I, 3.6/1-3.6/19
3.7	1	0	DD+DIS244.01E	3.7/I, 3.7/1-3.7/12
3.8	1	0	DD+DIS244.01E	3.8/I, 3.8/1-3.8/4
4	1	0	DD+DIS244.01E	4/I, 4/1
5	1	0	DD+DIS177.00M	Cover sheet 5/ii-5/x, 5/1-5/6
6	1 1 1 1	2 0 0 2	DD+DIS024.02E DD+DIS105.01E DD+DIS124.01E DD+DIS024.02E	Chapter contents Cover sheet, 6/I; 6/1-6/13 Cover sheet, 6/I, 6/1-6/8 Cover sheet, 6/I, 6/1-6/4
7	1 1	0 1	DD+DIS248.01E DD+DIS277.01E	7/I-II; 7/1-7/41 7/I-II; 7/1-7/41
8	--	--	--	--
9	1	0	DD+DIS249.01E	Cover sheet, 9/I, 9/1-9/4
10	1 1	FSB 2 FSB 1	DD+DIS262.01E DD+DIS276.01E	10/1 10/1 – 10/3
11	1	0	DD+DIS250.01E	Cover sheet, 11/I-II, 11/1-11/22
12	1	0	DD+DIS244.01E	12/I, 12/1-12/3

Proceed as follows to check if the present documentation is up to date and complete

If you want to check whether your documentation is on the newest level, order the order list and the checklist for completeness as follows:

- **INTERNET:** **DIGINET:**

  http://www.DigiNet-Agfa.de

  ⇒ Database **"General"** ⇒ Forum **"Doc Order List"**

  To view this Internet page you need a user ID and a password. If you have no access authorization, please log in as "New User" and apply for a User ID and a password via e-mail.
  If you have problems with your access to DigiNet please turn to our DigiNet Administrator under the following e-mail address:
  herbert.plaschke.hp@germany.agfa.com

- **Fax:** As an alternative you may order the order list and the checklist for completeness by specifying the product name and sending your request to the following fax number:

  +49 - 89 - 6207 - 7271 / 7455

Set up Procedure

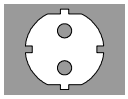
1

Chapter 1

contains all the important steps to be carried out prior to installation:

- Inspection of the shipment, checking of safety indicators on the machine box and checking for transport damage
- Checking of the scope of delivery and comparison with the packing list
- Unpacking and removal of transport safeguards
- Checking the installation site for machine access for repair and maintenance, comparison of these steps with the installation planning instructions
- Specifications
- Safety regulations, test certificates

Make sure to study this section and before starting the installation check if all preparations have been completed as specified.



Chapter 1:

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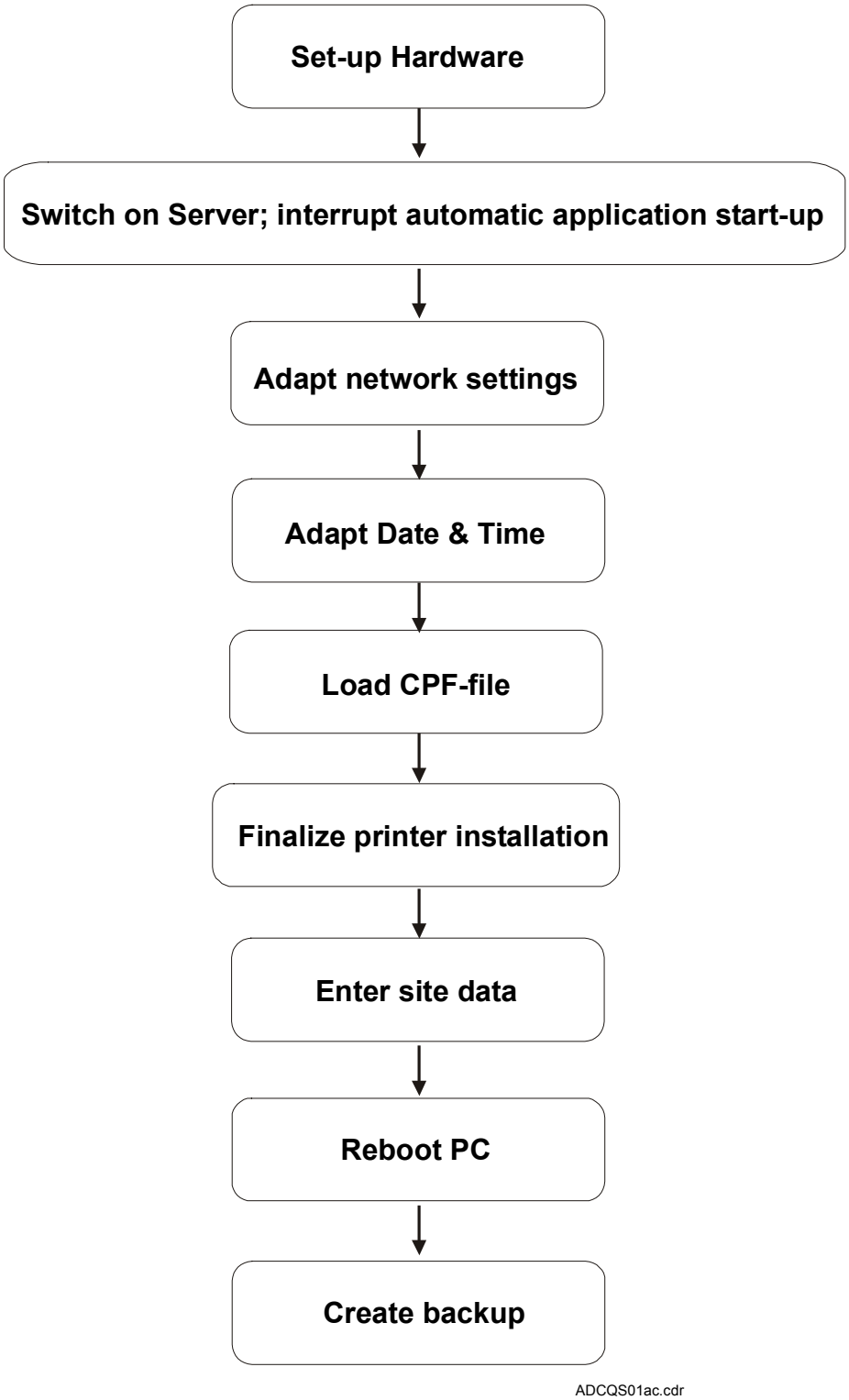
1 Set-up Procedure for ADC QS Server Station

1.1 Overview of Installation Sequence



1.2 Controls and Connections of ADC QS Server PC

For control panels and connection diagrams, please refer to the user manual of the PC.

1.3 Default Settings

The ADC QS Server-Stations are set ex works to the following rated voltages and rated frequencies:

- PCs: 1N~150/230V, 50/60 Hz.

Adaptation to mains voltage is automatic.

1.4 Network Connection of ADC QS Server-Station

The PCs for the ADC QS Server Station are delivered with an integrated Network Board for FAST Ethernet (100 Mb/s, Twisted Pair) and 10 Mbit/s Ethernet connection (autosensing).

If an AUI/BNC connection is required, an additional HUB is necessary.

1.5 Start-up of the ADC QS Server Station

As the ADC QS Server Station is staged in AGFA, all the necessary sw is preloaded and the system is ready to work.

1.5.1 Login to the ADC QS Server Station

(1) Switch on the ADC QS Server Station.
At the end of NT boot sequence the application login window appears.
Note: ADC QS Server is set to auto-logon to NT.

(2) Click <OK> to login
No username or password required. The ADC QS application is ready for use now.

1.5.2 Integrating the ADC QS Server Station into an independent, pure ADC Network

1 ADC COMPACT digitizer
or
1 ADC SOLO digitizer

1 ADC QS Server station

1 ID Station

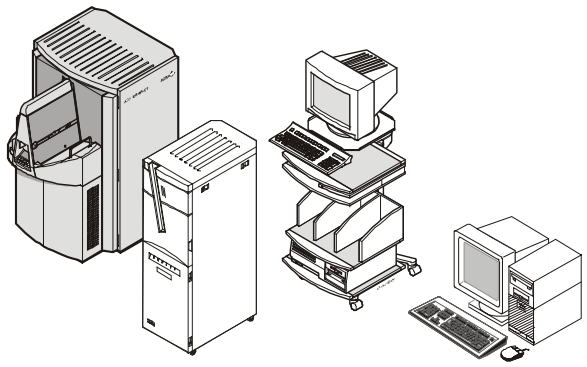
(1 client station)

In this case the ex factory settings are used.

A new configuration of the machine **is not** required.

Measures:

Connect the Ethernet.



1.5.3 Integrating the ADC QS Server Station into an existing Network

In this case the ip-address has to be adapted to an existing network. This happens by means of the cpf–file created beforehand via CCM-tool.

1.5.3.1 Adapt the Network Settings of the Server Station

(1) Stop ADC QS application by clicking on Stop ADC QS icon on desktop

and select <Start>
<Settings>
<Control Panel>

(2) Select <Network>
select <Identification> tab to change the computer/host name (if necessary) and confirm with <OK>

(3) Select <Protocols>
<TCP/IP Protocol>
<Properties>
<IP-Address>
and confirm your changes with <OK>.

(4) Select <Close> to leave the Network configuration window

(5) Click <No> when you are asked to restart your computer.
The IP-address is now set.

1.5.3.2 Date and Time Settings

(6) Stop ADC QS application if not already done

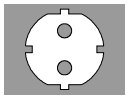
(7) Select in the <Start> menu:
<Settings>
<Control Panel>
<Date/Time>

(8) Select <Date and Time> tab and make your selections

(9) Select <Time Zone> tab and make your selections

(10) Confirm with <OK>

(11) Reboot the ADC QS Server Station and login again.



1.5.3.3 Loading the cpf-file

The cpf-file with the site specific network addresses incorporated, must have been created in advance.

(12) Select in the <Start> menu:
<Agfa>
<Adc qs>
<Configuration>

(13) Click <OK> to login
No username or password required. The Configuration Viewer starts up.

(14) Insert the floppy disk with the cpf-file *adc.cpf*

(15) Select <File>
<Import CPF ...>

(16) Select floppy drive and cpf-file to be imported

(17) Click <Open> to start import.
The cpf-file is imported

(18) When finished confirm with <OK>

For further system configuration like adding printers or setting of image criteria, please refer to chapter **3.7**.

1.5.3.4 Enter the Site Information Data

(19) Reboot the ADC QS Server Station.

(20) Select
<Start>
<Agfa>
<Adcqs>
<Configuration>
The Configuration Viewer Login appears

(21) Click <OK> to login (no user name or password required)
The Configuration Viewer starts up.

(22) Select
<Setup>
<Site Information>
<Administration>

(23) Fill in the Site Information Data

(24) Exit Configuration Viewer

1.6 System Test

Preconditions

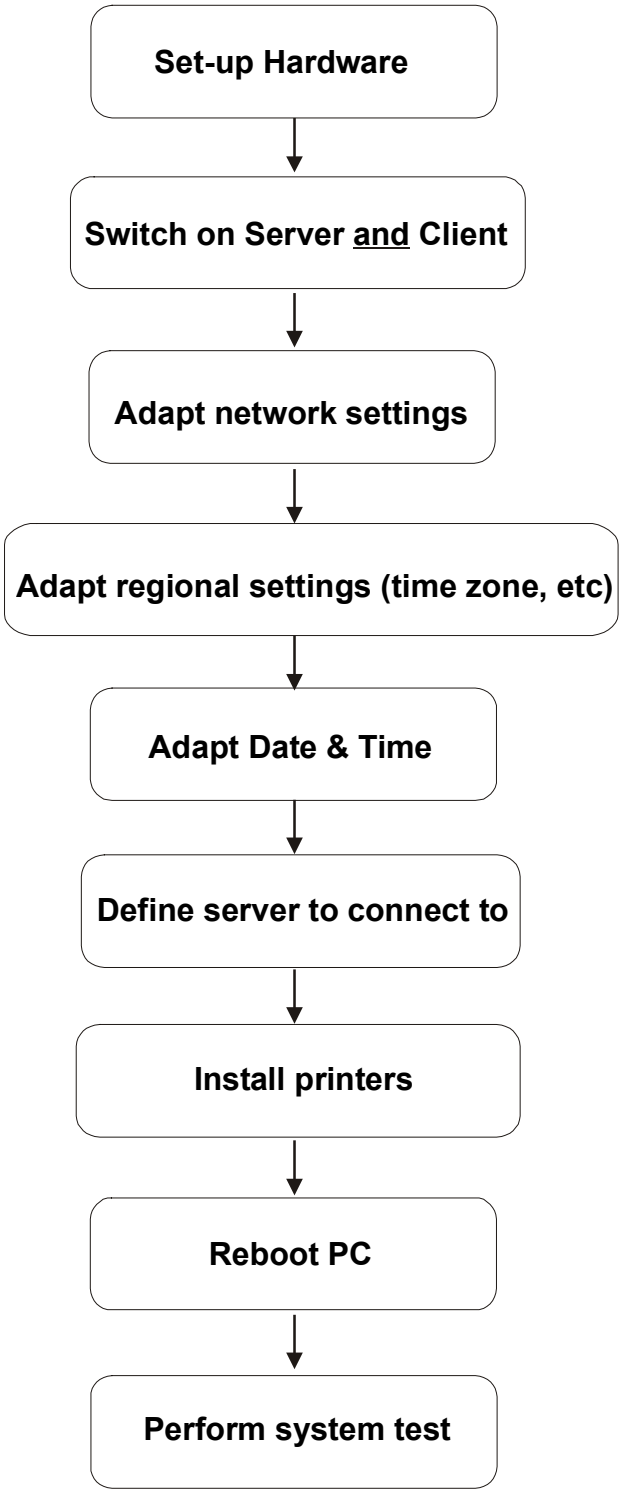
All ADC system components have to be put into operation and must be obtainable via Ethernet.

All ADC system components have to make use of the same cpf-file.

(1) Identify a cassette at the ID Station and send it to ADC QS Server Station.
(2) Check if the image arrives.
(3) Print or send the image to a destination.

2 Set-up Procedure for ADC QS Client Station

2.1 Overview of Installation Sequence



2.2 Controls and Connections of ADC QS Client PC

For control panels and connection diagrams, please refer to the user manual of the PC.

2.3 Default Settings

The ADC QS Client Stations are set ex works to the following rated voltages and rated frequencies:

- PCs: 1N~115/230V, 50/60 Hz.

Adaptation to mains voltage is automatic.

2.4 Network Connection of ADC QS Client-Station

The PCs for the Client - Station are delivered with an integrated Network Board for FAST Ethernet (100 Mb/s, Twisted Pair) and 10 Mbit/s Ethernet connection (autosensing).

If an AUI/BNC connection is required, an additional HUB will be necessary.

2.5 Start-up of the ADC QS Client Station

As the ADC QS Client Station is staged in AGFA, all the necessary software is preloaded and the system is ready to work.

2.5.1 Start-up of the ADC QS Client Station

(1) Make sure that the ADC QS Server Station is up and running.

(2) Switch on the Client Station.
The NT boot sequence starts. The ADC QS client station is set to auto-logon to NT.

(3) Start ADC QS application

(4) Confirm login with <OK>.
No username or password required.
The ADC QS application is ready for use now.

2.5.2 Integrating the ADC QS Client Station into an independent, pure ADC Network

1 ADC COMPACT digitizer
or
1 ADC SOLO digitizer

1 ADC QS Server station

1 ID Station

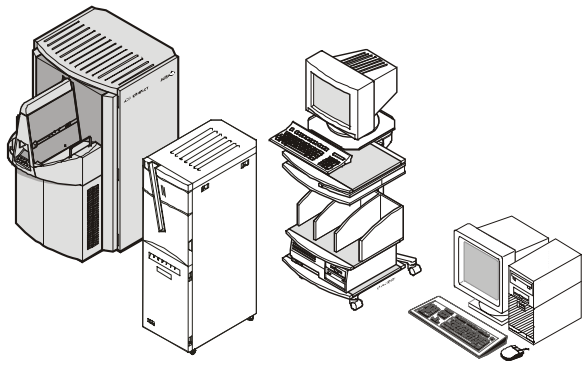
1 Client station

In this case the ex factory settings are used.

A new configuration of the machine **is not** required.

Measures:

Connect the Ethernet.



514503aa.cdr

2.5.3 Integrating the ADC QS Client Station into an existing Network

In this case the ip-address has to be adapted to an existing network.

2.5.3.1 Adapt the Network Settings of the ADC QS Client Station

(1) Stop ADC QS application by clicking on Stop ADC QS icon on desktop.

(2) Select
<Start>
<Settings>
<Control panel>

(3) Select `<Network>`

(4) Select `<Identification>` tab to change the computer/host name (if necessary)

(5) Confirm with `<OK>` to return to `Network` window
and select
`<Protocols>`
`<TCP/IP Protocol>`
`<Properties>`
<IP-Address>

(6) Confirm your changes with `<OK>`

(7) Select `<Close>` to leave the Network configuration window
`Network Settings Change` window appears

(8) Click `<No>`

2.5.3.2 Date and Time Settings

(9) Stop ADC QS application by clicking on Stop ADC QS icon on desktop, if not already done.

(10) Select
<Start>
<Settings>
<Control panel>
The `Control Panel` window appears.

(11) Select `<Date/Time>`

(12) Select <`Date and Time`> tab and make your selections.

(13) Select <`Time Zone`> tab and make your selections.

(14) Confirm with `<OK>`

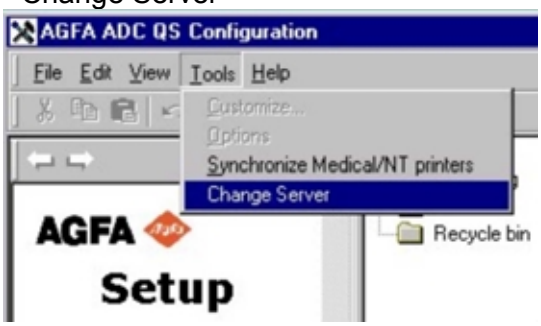
(15) Reboot the ADC QS Client Station and login.

2.5.3.3 Connecting the Client Station to the ADC QS Server Station

(16) Select
<Start>
<Agfa>
<Adcqs>
<Configuration>
The Configuration Viewer login appears

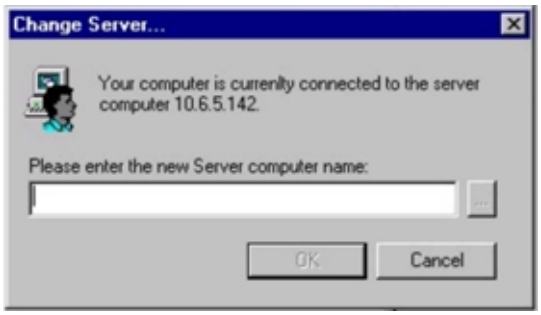
(17) Click <OK> to login (no user name or password required)
The Configuration Viewer starts up.

(18) Select
<Tools>
<Change Server>



(Alternatively, Change Server window can be opened by clicking the corresponding icon in the menu bar)

(19) Enter new computer name or IP address of ADC QS Server Station and click <OK>


Change Server...
Your computer is currently connected to the server computer 10.6.5.142.
Please enter the new Server computer name:
OK
Cancel

For further system configuration like adding printers or setting of image criteria, please refer to chapter **3.7**.

2.6 System Test

Preconditions

All ADC components have to be put into operation and must be obtainable via Ethernet.

All ADC components have to make use of the same cpf-file.

(1) Identify a cassette on ID Station and send it to ADC QS Server Station.

(2) Check if the image is displayed on the client station as well.

(3) Print an image on the default printer.

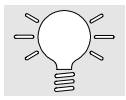
Functional Description

2

Chapter 2

explains the machine principle and describes its function in normal conditions.

Furthermore it describes the structure and function of individual assemblies.



Chapter 2

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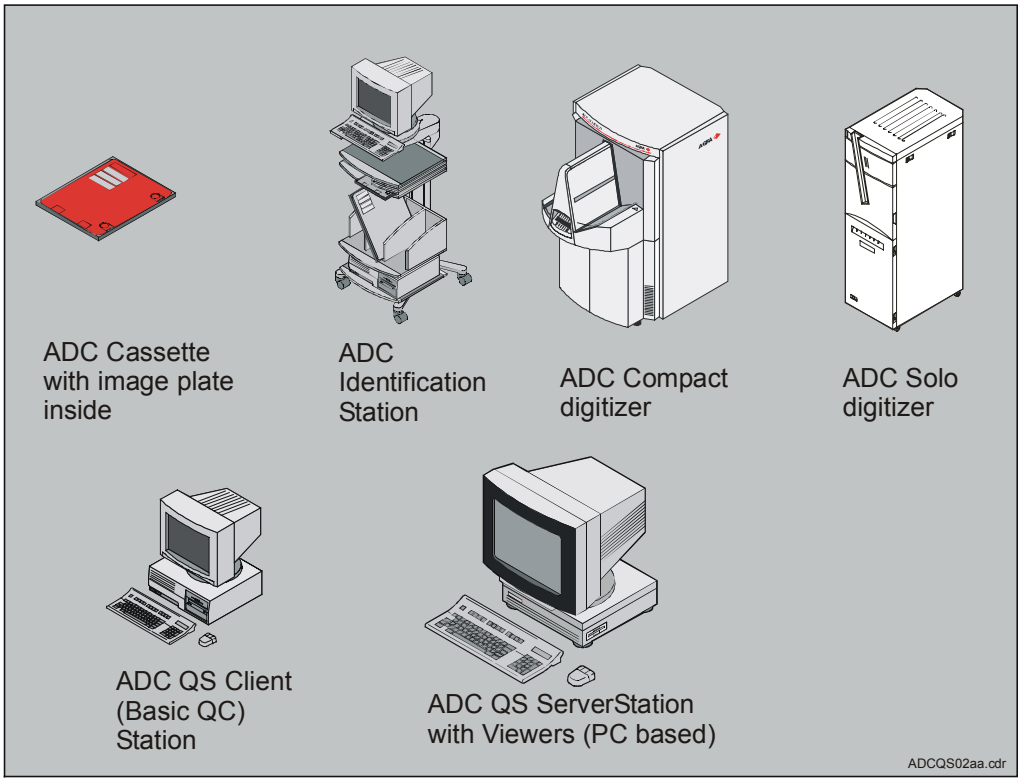
1 System Overview

This chapter gives a short overview of the complete ADC system. Further on, the internal functionality of the ADC-QS Server Station (PC-based) is discussed.
For a description of the user related topics please refer to the ADC user manuals.

1.1 System Components


ADC Cassette with image plate inside
ADC Identification Station
ADC Compact digitizer
ADC Solo digitizer
ADC QS Client (Basic QC) Station
ADC QS ServerStation with Viewers (PC based)
ADCQS02aa.cdr

System components

Image Plate The image plate takes the place of the X-ray film in an conventional system. It receives the X-Ray radiation and “stores” a latent image. The image plates can be reused thousands of times. The actual restriction of utilization is the mechanical robustness.

ADC Cassette The ADC cassette is the “container” for the image plate. During the handling outside the Digitizer (e.g. exposing the plate) the image plate is in the cassette. It is only opened inside the Digitizer. The ADC cassette has an internal chip card which holds the cassette, patient, examination and routing data belonging to a certain x-ray exposure.

Identification Station

The Identification Station is used to write the cassette, patient, examination and routing data to the cassette chip. This data can be entered manually or by retrieving the data from a Hospital or Radiology Information System (HIS/RIS).

By means of a so called Identification Tablet (ID-Tablet) the data is transferred to the chip. Writing and reading is done by means of radio frequency in a contactless manner.

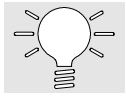
The Identification software is an AGFA product and is running on MS-Windows based operating systems (WIN95/98, WinNT4.0). Please not if you want to run ADC-QS (Basic) QC-Viewer on the same PC you have WinNT installed.

Digitizer

The Digitizer is used to read the latent image in the image plate. After the ADC cassette is exposed and identified it is inserted into the Digitizer. The Digitizer reads the data on the cassette chip, opens the cassette, takes out the image plate and scans it. The latent image on the image plate is stimulated by means of a laser beam to emit light according to x-ray exposure.

The data from the cassette chip is used to set the scan parameters correctly (e.g. speed class, image plate size, etc.) for this individual x-ray exposure. The emitted light is converted into a voltage and then digitalized into a 12bit, square root compressed raw image. This image is transmitted together with the chip data on the fly via Ethernet to the ADC-QS Server Station. A backup of that image is made on the internal hard disk in parallel to retransmit the image in case off transmission problems. The output format of the Digitizer is DICOM SCU-CR.

After scanning / transmitting is finished the image plate is erased with very bright light to make it ready for the next exposure. It is put back into the cassette and a status flag on the cassette chip is set from “EXPOSED” to “ERASED”. The cassette is returned to the user and is ready for the next examination.



ADC-QS Server Station

The ADC-QS Server Station receives the raw image from the Digitizer. Every incoming image is converted from a raw image into multi scale or pyramidal image format by the Gateway component of the ADC-QS Server Station. The thus converted images are stored on the internal hard disk(s) on the ADC-QS Server Station. In addition the Gateway component takes care that necessary database entries are performed on the ADC-QS Server Station.

However the ADC-QS Server Station provides only short term storage. The final archiving must be realized either by hardcopies or a PACS. Later also the ADC-QS Server Station will provide an archive possibility (not in major Release 1).

Further on the ADC-QS Server Station decodes the routing data and sends the image data to the selected destinations (e.g. Printer or a DICOM destination).

For the ADC-QS Server Station a lot of licensed software options (e.g. Black Border, Annotation, Smart Print, etc.) exist.

The ADC-QS Server Station is an NT-based PC with the **ADC Q**uality **S**ystem software installed (ADC-QS).

ADC Client / Basic QC Station

The ADC Basic QC Station software allows basic viewing on some other actions on the studies stored on the ADC-QS Server Station. It is included in the basic package and provides fast access to new incoming images. It is comparable with the former Preview Station.

To get more sophisticated viewing additional ADC-QS software options have to be purchased.

The ADC Client (Basic QC) Station allows the user to release the patient rather quickly from the examination session.

Several ADC Client (Basic QC) Stations can be served by one Server Station. The ADC Client (Basic QC) Station software may run on the same PC-Hardware as the Identification Station software but it also may run on a separate PC.

The ADC Basic QC Station software is an AGFA product and is running on WinNT4.0

ADC QS Viewers

ADC-QS Viewers are software components which provide the user with all kind of viewing applications for CR-studies. Some of them are included in the basic software package (e.g. ADC QS Basic QC Viewer) others have to be purchased separately.

The following ADC-QS Viewers are existing at the moment:

ADC QC Viewer:
this is an extended version of the ADC Basic QC Station with more functionality

IPD-Viewer:
Viewer which allows all kind of image manipulation like MUSICA image processing

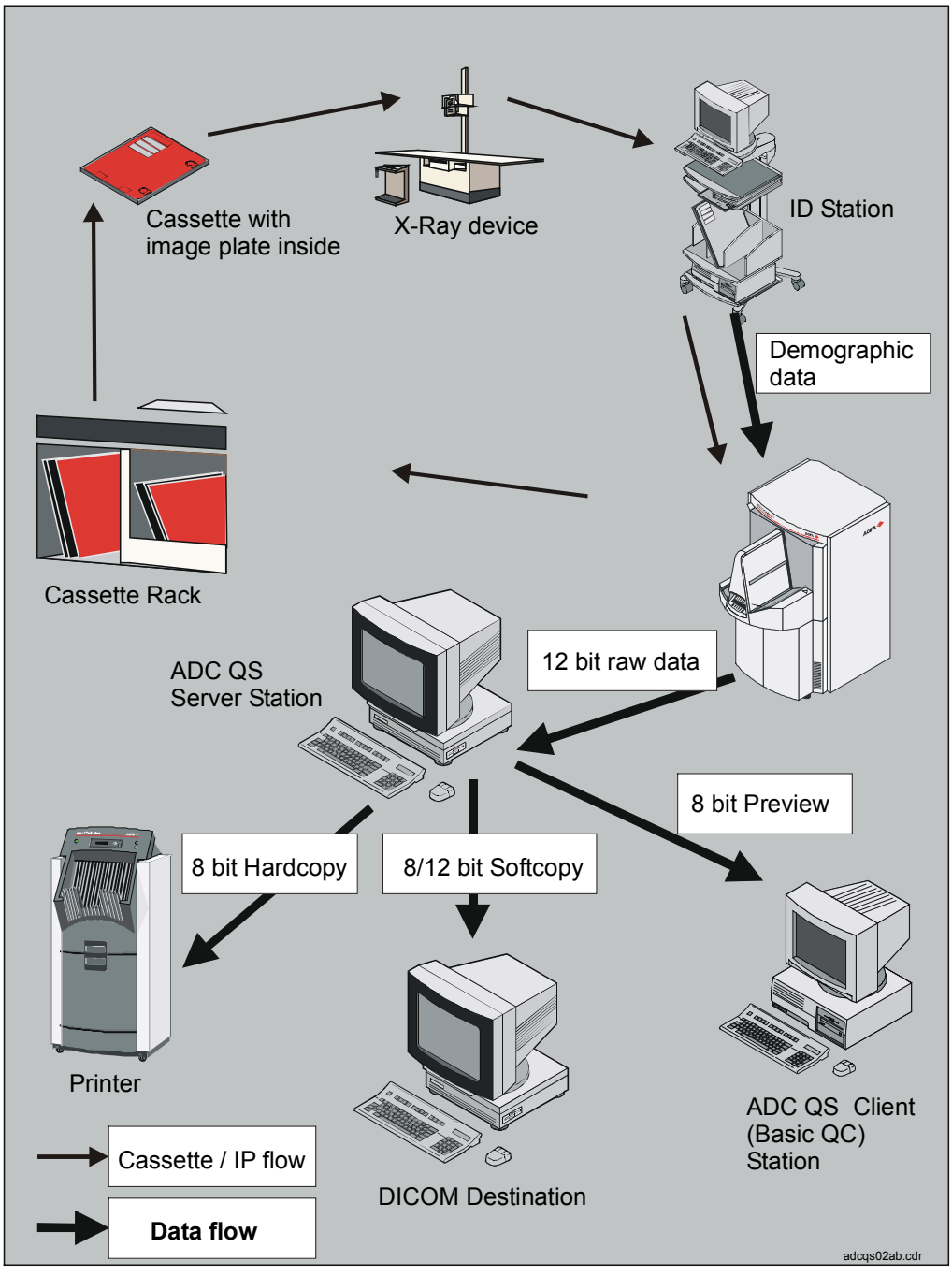
Selector:
Viewer to get an overview over the studies available on the ADC-QS Server Station. Study display may be character oriented and/or with thumbnail images.

Configuration Viewer:
Viewer to configure the ADC-QS Server Station

Print Composer:
Viewer to configure and manage ADC-QS Server Station

1.2 System Data Flow

For more information about the ADC-System operation refer to the ADC User manuals as well.



System Data flow

2 ADC-QS Server Station

The ADC-QS Server Station is the center of the ADC Quality System. There all the data (image and demographic) arrives and the whole administration happens. The following main tasks can be distinguished:

- Reception of images (DICOM SCP-CR)
- Automatic processing of the images according to the examination
- Storage administration for the images on the local hard disks (only for short term storage)
- Demographic data management by ORACLE relational data base management system (rdbms)
- Preparing and transmitting image data for output to different destination types (e.g. HCP (DICOM SCU Print), including automatic routing.
- Queue management
- Intuitive User Interface (Viewers) to do all kind of image manipulations for the user (e.g. change image processing, apply annotation, system monitoring and set up, configurable search and filter criteria, view and edit patient demographics, print layout configuration system, etc.).
- Error and warning message management with logging functionality (NT-Event Viewer).

2.1 Technical Specifications of the ADC-QS Server Station

2.1.1 Hardware

2.1.1.1 ADC-QS Server Station – Server / Standalone

- DELL Server Hardware with floppy drive, CD-ROM drive and two SCSI hard disks inside. The ADC-QS Server Station HW may change during the course of time.
- Standard Brightness Monitor (21”, 8-bit grayscale monitor)
- Please refer to chapter 14 for more information

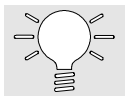
2.1.1.2 Optional Hardware

- High Brightness monitor (21”, 8 bit-grayscale monitor)
- Uninterruptible Power Supply (UPS) with 700 VA
- ADC Test Phantom Set
- ADC Standard PC for network client application of ADC QS Viewers
- Please refer to chapter 14 for more information

2.1.2 Software

2.1.2.1 Basic Software Modules

- *Microsoft Windows NT4.0 Server/Workstation



- Microsoft Windows NT Service Pack 6A
- **Microsoft Windows Scripting Host
- **Microsoft Windows NT Task Scheduler
- Microsoft Internet Explorer 5.5 (IE5.5)
- Microsoft Java Virtual Machine
- **Microsoft Internet Information Server (IIS)
- **ORACLE referential database management system (Enterprise Edition)
- Symantec PC-Anywhere
- AGFA application ADC-QS software(ADC **Q**uality **S**ystem) or ADC-QS Online Processing software

*The NT Workstation version is used on client stations only while the NT Server version is only used on the ADC_QS Server / Standalone.
**Components only installed on the ADC_QS Server / Standalone.

2.1.2.2 Optional (AGFA) software

- ADC IDP Viewer Software
- ADC QC Viewer Software
- ADC Autorouting Software
- ADC Uro/Tomo Software
- ADC Pediatric Software
- ADC DICOM Store Connection
- ADC Dental Software
- ADC Smart Print Software
- ADC Annotation Software
- ADC Black Border Software
- ADC Multi-Format Import/Export Software
- ADC Full Leg/Spine Software
- ADC QC Software
- ADC Dose Monitoring Software

The list of options may vary during the time. The above mentioned option maybe released for different software versions. In addition the list shows all options planned at the moment this document was created. Please follow the news distributed by AGFA to check what is released and what not.

2.2 Software Architecture

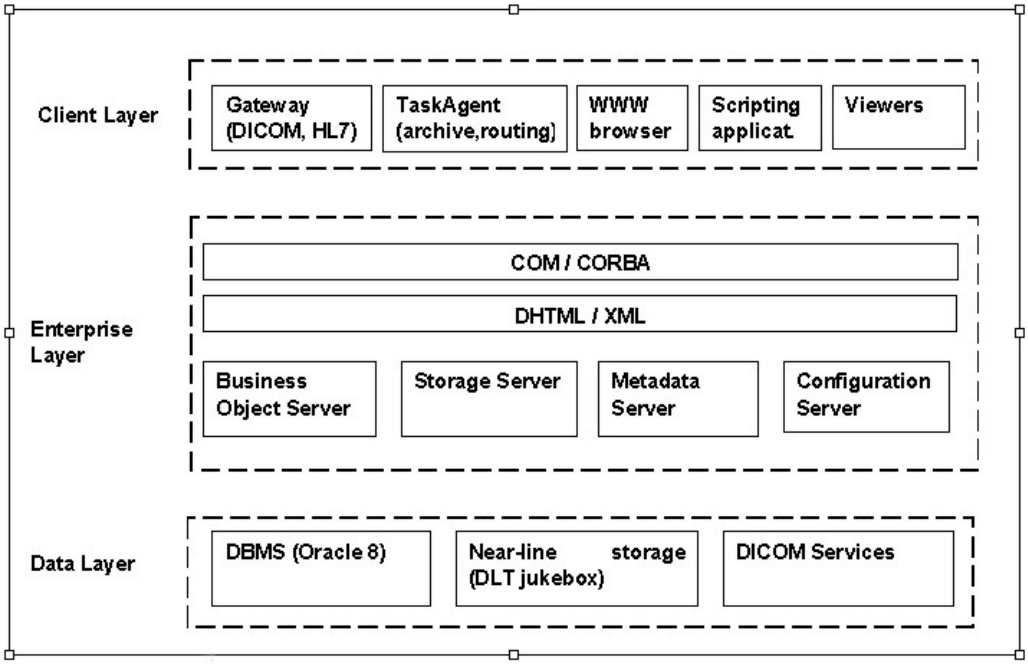
The ADC QS Server Station is based on PC Hardware and runs on the Microsoft NT operating system.

The management of the demographic data is done by a rdbms (**r**elational **d**ata **b**ase **m**anagement system) from ORACLE.

The ADC-QS software is the AGFA part of the software running on the Server Station. The rest is standard software from different vendors (Microsoft, ORACLE, Symantec, etc.).

The ADC-QS software consists of three independent layers (three tier Architecture).

- Client Layer
- Enterprise or Business Layer
- Data or Storage Layer

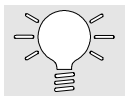


As the three different layers are communicating through standardized interface like COM or ODBC modules can be exchanged without having to adapt modules form other layers.

The client layer contains all the modules the user sees and interacts with (e.g. Viewers, Task Manager, DICOM CR-Store SCP Gateway, etc.). All tasks initiated on this layer are forwarded through the COM / DCOM layer to the Enterprise Layer.

The Enterprise or Business Layer contains the application logic. This means it manages and administers all the tasks and actions to be performed with a study. Studies in ADC-QS terms are also called *Procedure Steps* or *Business Objects*. It

- Creates the database entries for a new incoming study according to the healthcare object model.
- Takes care about storing the images on the local / near-line storage.
- Takes care about status information for a certain study
- Administrates all configuration issues.
- Triggers tasks like routing, printing or sending.



- Manages updates of study demographic data.
- Notifies the Viewers about new incoming images.
- Forwards queries issued by means of the Viewers.
- Handles any requests coming from the upper layer
- Does image processing
- Does DICOM store

The Enterprise or Business Layer is the "switchboard" of the ADC-QS system. This layer is represented by a bunch of server modules, dedicated for special tasks. This layer is also called the COMPAS Server component.

The Data or Storage Layer is managed by the Enterprise or Business Layer as well. Here the actual data is stored. Demographic data is stored in the ORACLE database, pixel data is stored on the local hard disk or in an near-line storage device.

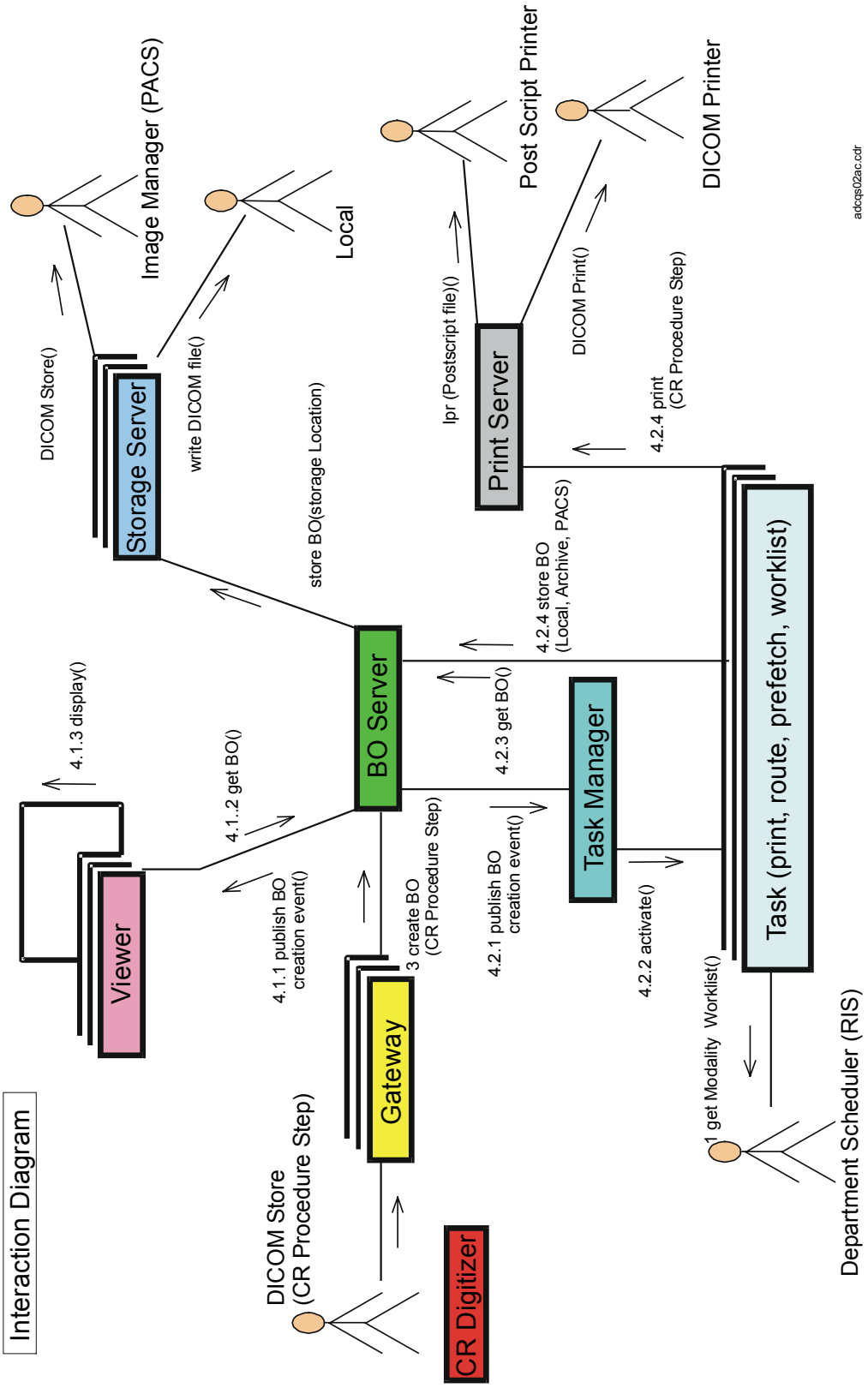
2.2.1 Software Main Components

The ADC-QS system consists of a set of components:

- Viewers
- Task Manager
- DICOM gateway for DICOM CR SCP
- Business Object Server
- Print Server
- Message Server
- Configuration Server
- Web Server

The components are located on one PC or are distributed over multiple PC's (not possible in first customer release). The components communicate with each other, using the COM/DCOM messaging framework of Windows NT. COM/DCOM is both used for stand-alone configurations as for distributed configurations. As a result there is not distinction (from software point of view) between a stand-alone configuration and a distributed configuration. Of course it has an impact on performance. (See Interaction Diagram).

Module Name	Program in NT Task Manager	Logging source in NT Event Viewer	Tasks
Gateway	gw2_r.exe	NEWGATEWAY	Receive CR-studies Convert DICOM stream to healthcare model Forward CR-Study to BOS
Business Object Server, Print Server, Message Server, Config. Server, Storage Server, Image Processing Server	compasserver.exe compaslogger.exe compasmsgmg.exe	BOSERVER	Connection to database at startup Image processing Creation/modification of database entries for CR-studies and Configuration Objects. Querying the database Create and send DICOM softcopies to PACS systems. Logging and displaying messages
Task Manager	tmservrr.exe tmcontxr.exe	TASKMANAGER	Managing background tasks like storage management, routing, etc
Dicom Port Monitor	Portmap.exe Spoolss.exe	DICOMPRINT	Creates DICOM images from Postscript files
Viewer Fram.	CRViewer.exe	CR-ENTRY	User interface frames
IPD-Viewers	Viewer.exe	CR-ENTRY	Image Processing Display
QC-Viewer	QCViewer.exe	CR-ENTRY	Quality Control
Selector	Selector.exe	CR-ENTRY	Character based patient listing
Configuration Viewer	ConfigView.exe	CR-ENTRY	Configuration tool for configuring ADC-QS
PrintComposer	PRINTC~.EXE	CR-ENTRY	UI for creating print composition
BOExplorer	BOExplorer.exe	No logging	Browser for database entries


Interaction Diagram
Image Manager (PACS)
Local
Post Script Printer
DICOM Printer
DICOM Store()
write DICOM file()
lpr (Postscript file)()
DICOM Print()
Storage Server
Print Server
store BO(storage Location)
4.2.4 print
(CR Procedure Step)
4.2.4 store BO
(Local, Archive, PACS)
4.1.3 display()
BO Server
4.2.3 get BO()
4.1..2 get BO()
Task Manager
Task (print, route, prefetch, worklist)
Viewer
4.1.1 publish BO
creation event()
3 create BO
(CR Procedure Step)
4.2.1 publish BO
creation event()
4.2.2 activate()
Gateway
1 get Modality Worklist()
DICOM Store
(CR Procedure Step)
CR Digitizer
Department Scheduler (RIS)
adcqs02ac.cdr

2.2.1.1 Viewers

Please see the user manuals for a description of the different Viewers and their functionality.

2.2.1.2 DICOM Gateway

2.2.1.2.1 Functionality

The DICOM gateway receives CR studies (CR Procedure Steps) from a CR modality (ADC Compact / Solo) and stores them in the Business Object Server. The gateway supports DICOM CR Image Storage SCP. The gateway is a multi-threaded application which supports multiple inputs at the same time. A listener thread waits for a DICOM association request and passes the request to a processing thread; the processing thread validates the DICOM stream and creates Business Objects in the server. Normally four processing threads are running in the Gateway.

The following tasks are managed by the Gateway component:

- Listen to the DICOM port for a requested DICOM association.
- Open DICOM association to CR-modality.
- Receive CR-studies from the CR-modalities.
- Converts the received DICOM data stream into the internal format (healthcare model) of the ADC-QS.
- Forward the images of a CR-study to the BOS.
- Closes the DICOM association after a CR-study has been transmitted successfully.

For the first release the Gateway always resides on the same machine as the Business Object Server or ADC-QS Server machine. In later releases the Gateway component may run on different machines for load balancing reasons.

2.2.1.2.2 Configuration

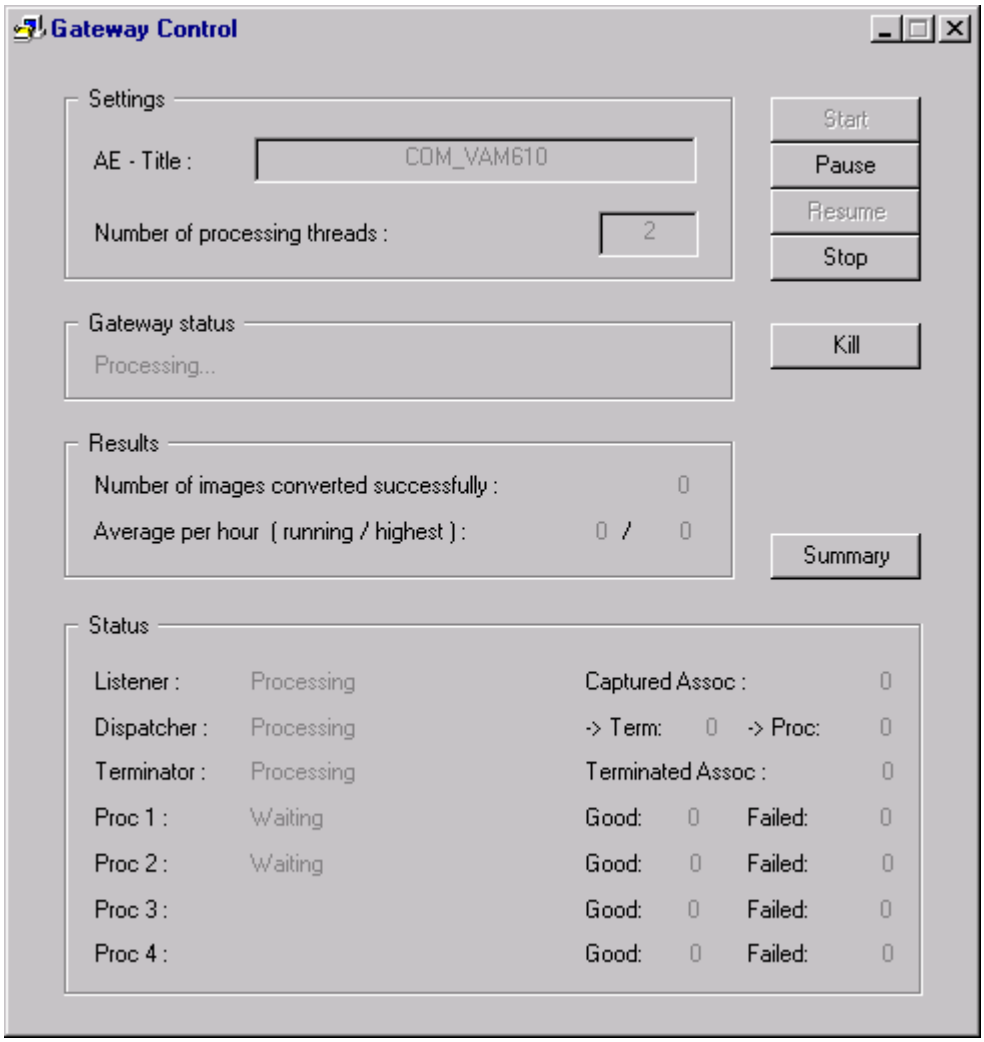
The Gateway is configured by means of the cpf-file. Later on the Configuration Viewer will be used for that purpose.

The mapping between the DICOM attributes and the Business Object properties is described in a file. There the mapping for all DICOM Inputs and DICOM Storage SCU Service Class Outputs (--> PACS Systems) is done. The installed mapping file is optimized for the ADC digitizers and it is not supposed to be changed in the field.

2.2.1.2.3 Monitoring

The NT Task manager can be used to monitor the gateway process resources; process name = GW2_R.exe

The Gateway GUI is used to monitor the status and configuration of the gateway.



- Start : Start the Gateway capturing and processing Dicom objects. Note that the Gateway starts up automatically after boot.
- Stop : Stop the Gateway: no more new objects are captured and processed. SCU's cannot connect any longer to the Gateway. Server connections are terminated gently. The dialog stays open.
- Pause : Pause the Gateway: no more new objects are captured and processed but SCU's can still connect. Created associations are terminated immediately.
- Resume : Resume the Gateway: new objects are captured and processed again.
- Kill : Immediately kills all threads. Even if some threads were still processing. Server connections are NOT terminated in a proper way. You will have to kill the 'dllhost' tasks inside the Task Manager.
- Summary : Collapse the dialog only showing a dialog summary.
- 'Result' area : shows the total number of successfully converted Dicom objects and the averages. The first number is a running number: the total

divided by the time the Gateway is running. The last number is the highest average since the Gateway was started.

- ‘Status’ area. This area shows some figures for each thread inside the Gateway. Although you can have as many processing threads as you want, only four are shown.
- 'Term' shows the amount of associations that have been opened but closed immediately because no processing thread was free. No data has been captured for these associations.
- 'Proc' shows the amount of processed associations: associations where data has been accepted and stored in the BO Server.
- ‘Failed’ or ‘Success’ indicates the failed or successful completion of BO storage.

2.2.1.2.4 Logging

Logging information is sent to the NT Event Viewer. If you only want to see the Gateway entries, use the filter to specify ‘NEWGATEWAY’ as the source.

2.2.1.3 Task Manager

2.2.1.3.1 Functionality

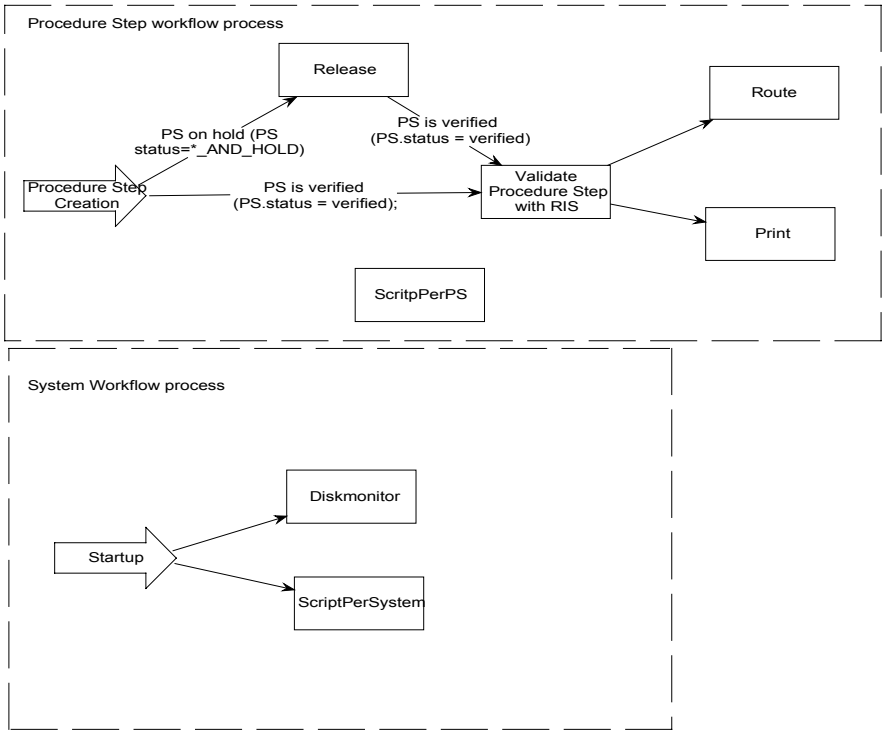
The task manager manages the different background tasks in the system.

Each task contains the following properties :

- task trigger: specifies when the task is invoked : manual, event driven (e.g. when a BO is created), periodically (at predefined time points).
- task condition (optional) : specifies the set of Business Objects on which the task apply : example : CR-Studies or Procedure Steps with **status** = VERIFIED and **routing status** = REQUESTED
- task behavior is defined in a script (Java Script).

A sequence of tasks can be performed for a particular Business Object (e.g. ProcedureStep) by assigning tasks to **status** property value (see workflow example).

The following predefined tasks are installed :



- Print task : print the incoming Procedure Steps (CR-Studies) to a DICOM or Postscript printer
- Route task : route the incoming Procedure Steps to one or more destinations
- Release task : release Procedure Steps, which are put in hold state, if the hold time exceeds the hold timeout
- Pre-fetch task : retrieve scheduled Procedure Steps from archive to local storage (Not in release 1)
- Disk monitor task : monitor the available disk space and delete Procedure Steps, based on pre-defined rules
- Backup task : backup the configuration settings and database on the second internal hard disk of the ADC-QS Server
- Performed Procedure task : Notify RIS about Procedure Step related status changes, using the DICOM Performed Procedure Step Service Class (not in Release 1).

2.2.1.3.2 Configuration and Monitoring

General

- Some tasks allow freely editing and deleting of its parameters. If these parameters are removed (by a wrong user operation), it is very hard to find back the correct parameter names. Therefore we recommend **not to edit the task parameters at all**. The default parameters are the tested ones and guarantee a proper working of the system!

If you are faced to a problem where a change of the settings may be necessary please **first contact an expert** (GSC).
If settings are already changed and the system does not run proper, please contact an expert (GSC).

- If status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

- The Configuration Viewer task manager does not update the status of a task when it changes. The only way to verify if a task is still running is in the NT-task scheduler.

- A task only works when server is running. Editing a task while the server is not running gives an error which can not be bypassed. In order to be sure that the server is running reset ADC QS Software, also if a problem occurs reset the ADC QS Software.

QC Phantom task

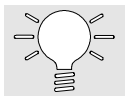
- The task manager lists QC Phantom task as ACTIVE, but this task is INACTIVE. This task is not implemented and can not be edited.

Elements of the task manager

The Configuration Viewer or the Task Browser is used to monitor the status and view the configuration of the tasks.

The NT Task manager can be used to monitor the ADC-QS task manager process resources. The process names representing the ADC-QS task manager are “tmservrr.exe” and “tmcontxr.exe”. If these two processes are not running automatic background tasks cannot be performed.

During startup the process “tmservrr.exe” checks (via the Business Object Server) in the database which tasks to start. It retrieves the task parameters and converts it into readable form for NT-Scheduler. It forwards that information to the NT-Scheduler, which in turn starts up there the tasks with the defined parameters.



After that “tmcontxr.exe” checks whether there are still jobs to be performed (e.g. CR-Studies with routing status set to “REQUESTED” and the status “VERIFIED”). If this is the case it initiates the corresponding scheduled task in the NT-Scheduler service, who finally performs the task.

In normal working the Business Object Server notifies the Task Manager to initiate actions.

The program “tmcontxr.exe” passes information between the different tasks via “tmcontxr.exe”.

The ADC-QS task manager browser is represented by the program “tmbrowser.exe”.

2.2.1.3.3 Logging

Logging information is sent to the NT Event Viewer. If you only want to see the ‘Task Manager’ entries, use the filter to specify ‘Task Manager’ as the source.

2.2.1.4 Business Object Server

2.2.1.4.1 Functionality

The Business Object Server is the core of ADC QS. There the whole management of patient demographics, status information for CR-Studies, configuration data and so forth is administered.
Business Object represents a real-world entity (e.g. patient, image, study) and is defined by a:

- set of properties : e.g. Business Object Patient contains properties like patient name, patient ID, etc...
- set of rules that define its behavior. Examples : validation rules, rules to define default values,..
- relations among Business Objects : Example : a CR-Series is the parent of an CR-Image

A Business Object Domain (BOD) describes a collection of data or Business Objects and corresponds with a particular application domain. The following domains are pre-defined :

- Healthcare domain : describes healthcare environment (patient, procedure steps, images). The DICOM model is used as the basis.
- NDT domain : describes the NDT environment (plant, components, images). A DICOM like model is used as the basis.
- Configuration domain : describes the configuration of the ADC/QS system (e.g. printer, gateway,...)

The Business Object Server contains the following sub-components :

- Metadata Server : manages the definitions (properties, rules, relations) of the different Business Object Domains. For example this may be the mapping between the DICOM groups & elements to the Healthcare application as it is structured in the database. Business Objects can be dynamically added (no need to re-compile the software)

- Business Object Services : provide to client applications (e.g. viewers) a set of services which are common to all Business Objects : e.g. query for Business Objects, create/delete Business Objects, get/set Business Object properties, Business Object event management, ..
- Image processing server : set of image processing routines (e.g. collimation, MUSICA, wall thickness measurement) that can be applied to a CR image. The complete imaging chain is described below.
- Storage server : stores the Business Object data on a logical storage location. The following storage types are supported :
  - local storage : database/file system on hard disk
  - local archive (=DLT jukebox) : only stores the image pixel data (not in first release)
  - XML file
  - DICOM storage (=DICOM Storage SCU)

The storage location specifics are hidden from the client application so that the same client code can be used to store Business Objects in the different storage location. Furthermore it is possible to support in the future new storage locations without the requirement to change client code. The different storage types are described below.

2.2.1.4.2 Configuration and Monitoring

The different Business Object domains are fully configurable and are described by a set of files. However these files normally do not have to be changed.
The Business Object Server is represented by three programs:

- **compasserver.exe** – takes care about all the interaction request with the database. At startup time it parses the information from the configuration files.
- **compasmsgmgr.exe** – creates the error messages for the message console
- **compaslogger.exe** – creates the logging in the NT-Event Viewer

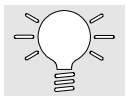
All three of them have to run, otherwise problems with the Server can be expected. The NT Task manager can be used to check this and monitor the task manager process resources;

2.2.1.4.3 Logging

Logging information is sent to the NT Event Viewer. If you only want to see the Business Object Server entries, use the filter to specify the source :

- BO Server : BO Server related logging
- ModelUpdater : Database scheme updater related logging
- Archive DB Updater : Archive related scheme updater related logging

A separate logfile exists to log jukebox related events : the loglevel and file location is configured in the Archive Administration section of the configuration viewer (default file location: c:\archive.log)



2.2.1.4.4 Storage Server

Functionality

The Storage Server stores the BO data on a logical storage location. The following storage types are supported :

- ***local storage*** : the structured information (e.g. patient name) is stored in an ODBC database; the non-structured information (e.g. pixel data files, print layout description) is stored in the file system under data directory. The current version only support Oracle 8.x as ODBC database. The database scheme is automatically created or updated from the metadata description.
- ***local archive*** : combination of local storage and a DLT jukebox : the structured information is stored in the ODBC database (cfr. local storage); the pixel data files are stored on local hard disk or in archive in a transparent way; hence the combination of local disk and archive is treated as a big file system. Files are automatically migrated from/to archive. Archiving is not supported in the first release of the ADC-QS software.
- ***XML file :*** the Business Object hierarchy is stored in a file as an XML document. The file contains both the metadata (=Business Object domain model) and the data (Business Object property values); as a result the XML file is the ideal format to import/export data among different (versions of) the ADC/QS system. The XML file can also be viewed by any XML compliant browser (e.g. IE5, Navigator 4.5). XML files are used to export/import the Healthcare Business Objects and the Configuration Business Objects. The goal is to replace the CPF files by the XML configuration files. In order to achieve backward compatibility, the current version supports the import of CPF files.

- ***DICOM storage*** : The DICOM Storage location is an DICOM CR Storage SCU and is used to send a procedure step to a DICOM archive like IMPAX. The DICOM storage supports the following image types :
  - SQRT E
  - LOG_E REL + separate VOI LUT (output values are expressed in OD_REL)
  - OD_REL
  - OD
  - P-Values (Presentation LUT is not yet supported)

For each of the image types it is possible to burn-in annotation and to apply geometrical transformations. A complete description of the meaning of the different image types is given below.

2.2.1.4.4.1 *Configuration*

The Configuration Viewer is used to define the configuration parameters of the DICOM storage location (e.g. DICOM attributes, processed image type, ..)

2.2.1.4.4.2 *Monitoring and logging*

See BO server description

2.2.1.4.5 Image Processing Server

2.2.1.4.5.1 *Functionality*

The image processing server contains a set of image processing algorithms that can be applied on CR images. The supported image processing algorithms are :

- Image rendering enhancement : creates a processed CR image; different types of processed CR images (e.g. LOGE_REL, OD, P, ..) can be created by tapping it from the different places of the imaging chain.
- Collimation
- Wall thickness measurement
- Density profile measurement

In addition, the most recently used images are cached in memory to improve the performance.
Processed Image types
The following types of processed images are supported :

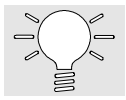


Image type	Rescale type	Rescale slope/inter-cept	VOI LUT	Window Center/ Window Width	#bits/pi-xel	Description
LOG_EREL	LOG_EREL	Slope = 1.0 Intercept = 0.0	Sensito curve + scaled to W/L; output = OD REL	-	12	Processed image
OD REL	OD_REL	slope = 1.0 intercept=0.0	-	2048/4096	12	LOG_E REL image + apply W/L and sensitometric
OD	OD	slope = 10.9804 intercept=200	-	1600/2800	8	OD_REL image + apply PresentationLUT, optimized for hardcopy
P*	P-Values	slope = 1.0 intercept=0.0	-	2048/4096	12	OD_REL image + apply Presentation LUT, optimized for human perception and device independent

* not in first release
By default, the processed image contains burned-in annotation and the geometrical transformations (rotation, flip) are already applied.

2.2.1.4.6 Print Server

2.2.1.4.6.1 Functionality

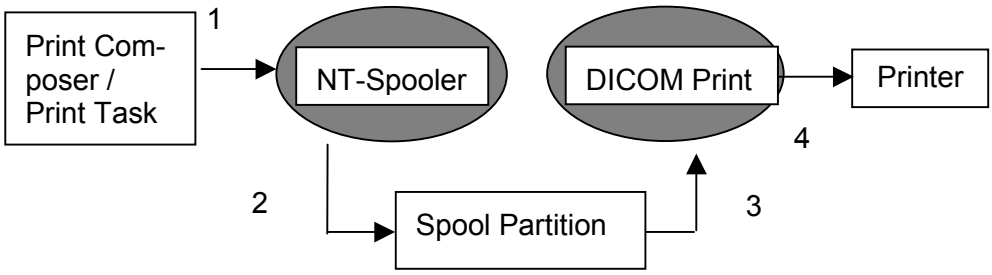
The print server is responsible for printing print jobs on a DICOM or Postscript printer and consists of the following components

- print composer : composes a page layout with images and annotation as described by the layout description (PSO stream)
- print driver : creates a postscript file, from the page layout composition
- print spooler : spools (queues) the postscript file
- port monitor : transmits the postscript file to the printer. The port monitor is printer specific:
  - The lpr port monitor uses the lpr protocol to send the postscript file to the postscript printer
  - The DICOM port monitor creates a page bitmap (4kx5k for a 14x17" film) from the postscript file using a Postscript RIP (in our case JAWS) and sends the page bitmap to the printer with DICOM Basic Print (standard layout 1/1). All the rendering is done in the DICOM port monitor and not in the printer anymore. Hence, the print result is the same on any DICOM printer.

The distinction between a postscript printer and DICOM printer is only made at the port monitor level. As a result all client applications, including desktop applications like MSWord can print on both a Postscript printer and a DICOM printer.

The printing is performed in two steps:

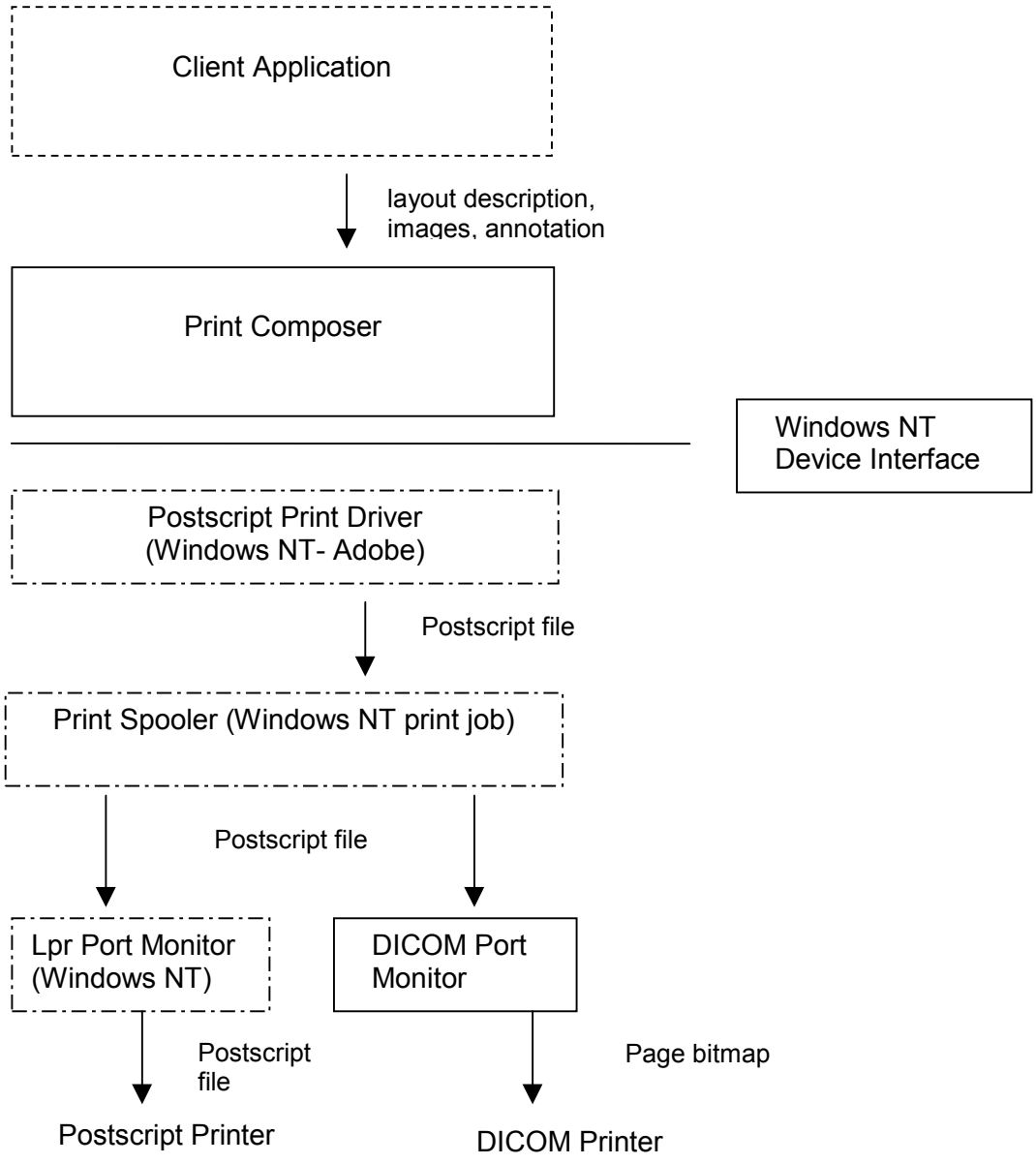
- **From the "Print Composer / Print Task" to the NT-Spooler (1,2)** – The "Print Composer / Print Task" spools the print job to the NT-Spooler on the spool partition of the ADC-QS. This is a postscript file. There is one bitmap file on the spool partition per job that is spooled but not printed. Errors occurring during spooling to the NT-partition are marked in the database setting the "Print Status" flag on "FAILED". This can happen when the spool partitions gets full. This job will not be automatically resent and has to be resent manually. If the print job is spooled successfully it will get the status "DONE"
- **From the NT-Spooler via "DICOM Print" to the Printer (3, 4)** – The "DICOM Print" application will convert the NT postscript print job into a DICOM print job and will send it to the printer. When an error occurs during this operation, the print job in the NT-spooler will get the status "failed". The printer status in the database however stays on "DONE" in the user interface.



Thus the printing can fail on two levels. If it fails somewhere in steps 1 or 2 it will be reflected in the Viewers by the print status flag set on "failed". If it fails somewhere between 3 and 4 it is reflected in the NT-spooler but not in the ADC-QS Viewer. This jobs stay on the spool partition and may fill it up as they are not deleted. Manual deletion or retransmission has to be done by the user via the NT print spooler.

Note if the print status flag for a print job has been set once in the database it is not changed anymore. Once it is on "failed" it stays on "failed" even if a second manual try has been successful. As this can be very confusing for the user it is recommended to remove that flag from the Viewers.

2.2.1.4.6.2 *Print architecture*



2.2.1.4.6.3 *Configuration*

The Adobe PPD files describe the printer capabilities and are used by the print driver to create a print job. The Configuration Viewer or cpf-file is used to define the configuration parameters of the DICOM printers.

2.2.1.4.6.4 *Monitoring*

The DICOM port monitor runs within the spooler process of NT. The NT Task manager can be used to monitor the spooler process resources; process name = spoolss.exe

2.2.1.4.6.5 *Logging*

Logging information is sent to the NT Event Viewer. If you only want to see the Business Object Server entries, use the filter to specify 'BOSERVER' as the source.

If there is an error during DICOM printing then an error will appear in the NT event viewer in system log (Source: DICOM Print).

2.2.1.4.7 Message Server

2.2.1.4.7.1 *Functionality*

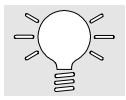
The message server stores all error/warning/.. messages from the different components in a logfile or in the NT Event logfile (default). The NT Event viewer is used to view/filter the NT Event logfiles.
The following message types are supported:

- Debug
- Logging
- Warning
- Error
- Audit

The language of the message is configurable.

2.2.1.4.7.2 *Configuration*

- It is configurable which message types will be logged (all other message types will not be stored). The default configuration is that all message types are logged except R&D debug messages.
- The log messages are language dependant, which configured by installing a language file



2.2.1.4.7.3 *Monitoring*

The NT Task manager can be used to monitor the message server process resources; process name = CompasMsgMgr.exe, CompasLogger.exe

2.2.1.4.8 Configuration Server

2.2.1.4.8.1 *Functionality*

The configuration information of the various components are stored in Configuration Objects in the database. These configuration parameters are treated like Business Objects.

For backward compatibility reasons, it is possible to import a CPF file. Most Configuration Object properties will be initialized with the corresponding CPF table properties The remaining properties (e.g. task manager parameters) are set to defaults and can be updated with the Configuration Viewer.

In addition it is also possible to export/import the configuration parameters in an XML file. This guarantees that all the configuration parameters are exported/imported.

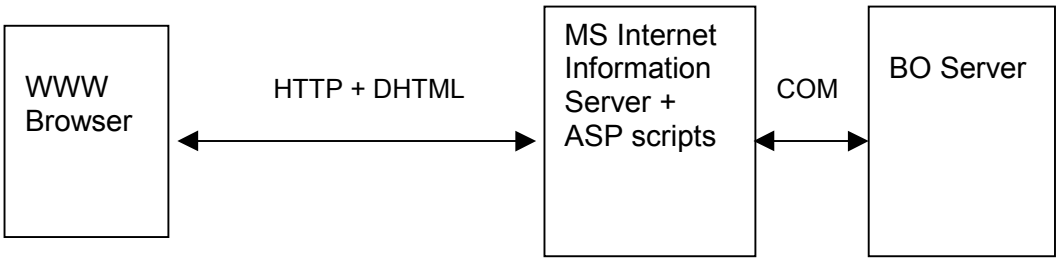
2.2.1.4.9 Web Server

2.2.1.4.9.1 *Functionality*

The Web Server is a HTML/HTTP front-end of the BO Server and Windows NT and is accessible with standard WWW browsers (e.g. IE, Navigator). The first application is to perform remote service administration.
The supported functionality is :

- Application level administration : similar to the Configuration Viewer
- WindowsNT administration
- Oracle administration

2.2.1.4.9.2 *Architecture*



2.2.1.4.9.3 *Server Configuration :*

- Local : Internet Service manager(plug-in for MS Management Console)
- Remote : Internet Service manager(HTML). This application makes use of the Windows NT challenge/Response mechanism, you can only access it with IE.

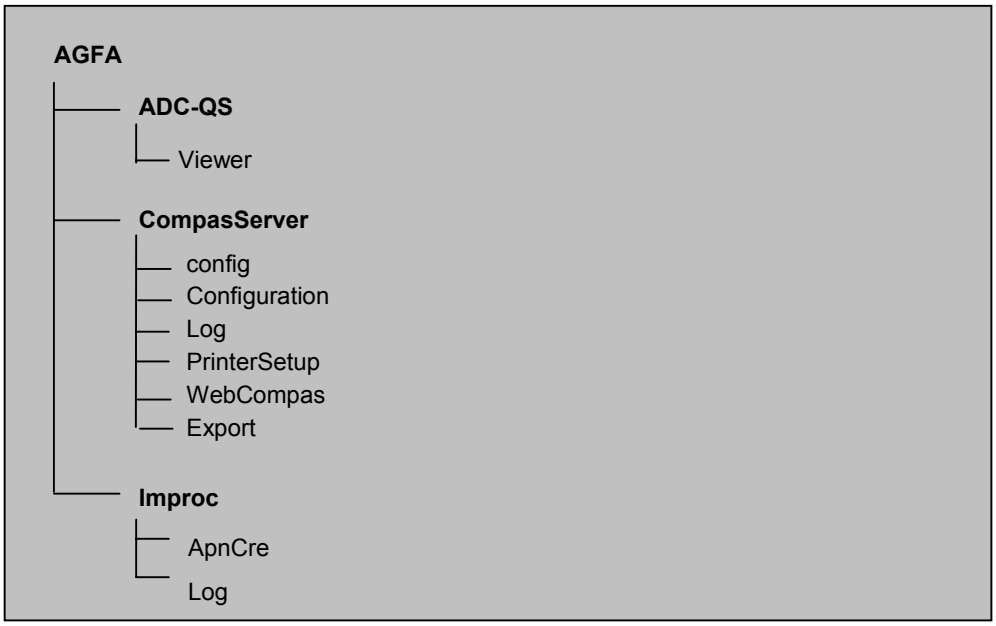
Supported WWW browsers : IE 4.x, Netscape 4.x (and higher)

2.2.2 Hard Disk Partition Layout

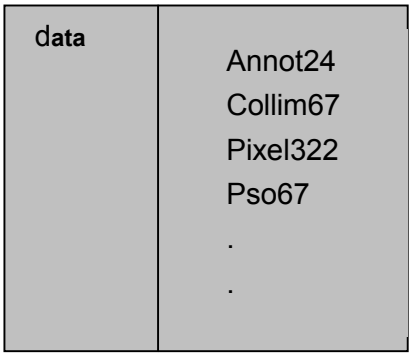
The ADC-QS Server / Standalone hardware is delivered with two internal SCSI hard disks.(momentarily 2x9.0GB). One disk contains is regarded as system disk (containing operating system, database, image spool buffer, AGFA's application software, other necessary software packages). There are two page-files or swap-files defined on the second hard disk, which also contains the data. The second hard disk should be selected for this to speed up the system.

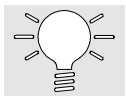
2.2.2.1 Special directories

The application software is stored under the directory "E:\AGFA".
There you find the following structure



The "ADC-QS" directory contains all the Viewer related programs and files. The "CompasServer" directory contains all the programs and files of the Business Object Server except the image processing algorithms which are stored under "Improc". Normally no actions are necessary in this directories. Under the directory "/data" the images or pixel files are stored. There you find the following structure





Normally, the “data” directory is not on the system disk. This is mostly for performance reasons. There you find four types of files:

- **Annot<#>** - This file contains the annotations which have been applied on a certain image file. The file is created during inserting images into the BOS. At that time it is empty.
- **Collim<#>** - This file contains the collimation frame.
- **Pixel<#>** - This file contains the actual image pixel data.
- **Pso<#>** - Contains information about the hardcopy layout on which the images is supposed to be printed. Initially this file may be empty as well.

Please note that the relation between the patient demographics and the files is only known in the database. The numbering does not give any relation between the files (i.e. same numbers do not necessarily mean same Procedure Step).

Repair and Service

3

Chapter 3

contains detailed information for repair and service.

Exact information of the machine functions (chapter 2) is the prerequisite for doing repairs and adjustments.

Chapter 3 is divided into the following chapters:

3.1 Safety regulations / general hints for repair work

3.2 Tools and auxiliary means, incl. software tools

3.3 Troubleshooting (Error codes, Infocounter, Error catalogue)

3.4 Codings, fuses, LEDs

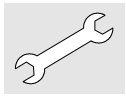
3.5 Repair Procedures

3.6 Adjustments, Calibrations and Software Settings

3.7 Configurations

3.8 Software – Release Info / Patches

3.9 FAQ – Frequently Asked Questions



Chapter 3.1

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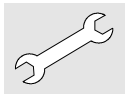
1.2 Protective Measures for Electronic Components 1

1.3 Safety Regulations for the Battery Replacement in CMOS 2

2 Repair Notes for ADC QS Server and Client Stations 2

3 Further safety guidelines 2



1 Safety Precautions

1.1 General

Before bringing the ADC Quality System into use you should always check that the following safety precautions have been taken:

- make sure that the various components of the ADC Quality System are installed in places where they can be constantly observed.
- do not bypass or disable any incorporated safety features.
- always disconnect the ADC Quality System from the mains before carrying out service or maintenance.
- troubleshooting, or electrical or mechanical repairs, may only be carried out by qualified service personnel.
- AGFA-Gevaert reserves the right to modify and improve their equipment in order to adapt them to the latest technical standards.
- There are no user-serviceable parts inside the ADC QS. Perform no other operations on the processing station than the ones described in the ADC QS manual.

With every repair work check the following points visually:

- Condition of the insulation of the mains plug / mains cable
- Effects of the strain relief for the mains cable
- Efficiency of the protective earth on metal panel parts (protective earth connected and spring contacts OK)
- Correct condition of the protection covers

The only reliable means of protecting the ADC QS Processing Station against blackouts or other potentially damaging events such as power surges and brownouts is to use the optionally available battery-backed uninterruptible power supply (UPS). The UPS (option) ensures that the electrical flow to the processing station is not interrupted because of a blackout.

1.2 Protective Measures for Electronic Components

Since there is a frequent problem with electrical components which are destroyed by static discharge, protective measures must be taken to avoid this problem. For the repair on electrical components it is necessary to wear the grounding strap around the wrist and connect the other end of this strap on a position of the frame which is free of lacquer.
Be attentive, that the frame is grounded!

This grounding strap is available under the spare part number CM+9.9999.0830.0 via LOG-T warehouse in Munich.

1.3 Safety Regulations for the Battery Replacement in CMOS

- Incorrect battery replacement involves the risk of explosion. Consider the correct polarity.
- Only use batteries of the same type or an equivalent type as specified by the manufacturer.
- Dispose of empty batteries in compliance with the specifications of the manufacturer.

2 Repair Notes for ADC QS Server and Client Stations

Upon repair work on the ADC QS Server and Client Stations consider the following points in order to avoid data loss or program failures in the machine.

The system should never be switched off or disconnected from the mains without doing a "Shutdown" routine first (all open programs are closed). Upon frequent mains interruptions we recommend to connect an uninterruptible power supply (UPS).

3 Further safety guidelines

For further safety guidelines of the ADC QS Server and Client Stations see the user manual of the respective PC.

For safety guidelines of the ID-tablet see service documentation ADC System Components (DD+DIS198.00E).

Order No.: DD+DIS246.01E

1 Piece UR8BB MA1

ADC Quality System

Type 4406/421

Chapter 3.2

Network Configuration:

Creation and Adaptation of the Configuration File (Version 11xx) for ADC QS Server Station

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AGFA

This document describes only how the network configuration is done with the help of the CCM-tool.
For a complete description of all the functionalities CCM11xx offers, please refer to document **DD+DIS116.00E**

1 Creation and Adaptation of the Configuration File

Before you start the adaptation of the configuration file to the customer specific network parameters, assign the necessary addresses and names with the local network administrator. Note the data in the enclosed form.

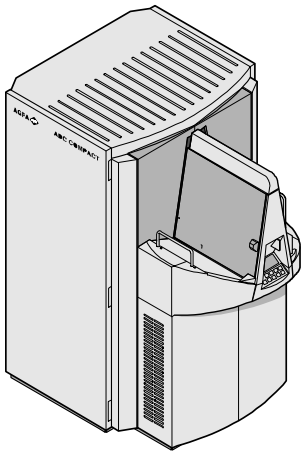
1.1 Which Data is necessary for the Configuration?

The following data is mandatory:

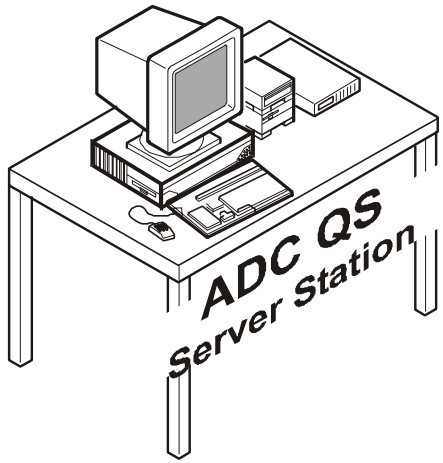
hostname
ip-address
AE-title
stationname

Below and on the next page you see an example of an ADC QS installation. It illustrates all necessary network data, which you assigned together with the application specialist and the local network administrator.

hostname:	**adcc1**
ip_addr.:	**192.9.200.199**
subnet_mask:*	**<** **>**
default router:*	**<** **>**
AE_title:	**ADC_COMPACT**
StationName:	**Scanner_199**

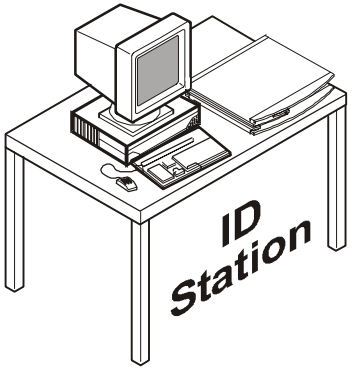


hostname:	**adc_qs**
ip_addr.:	**192.9.200.203**
subnet_mask:*	**<** **>**
default router:*	**<** **>**
AE_title:	**ADC_QS**
StationName:	**ADC_QS**

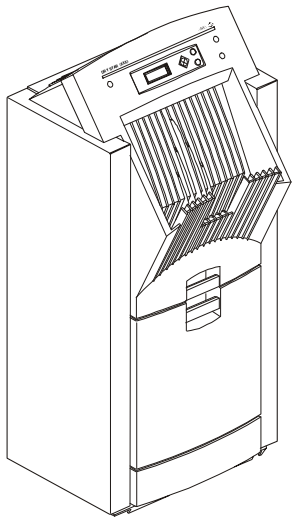


*depends on the local network of the hospital.

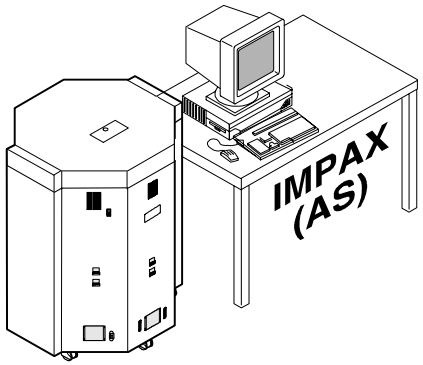
hostname:	**Id207**
ip_addr.:	**192.9.200.207**
subnet_mask:*	**<** **>**
default router:*	**<** **>**
AE_title:	**ID_207**
StationName:	**ID-Station_207**



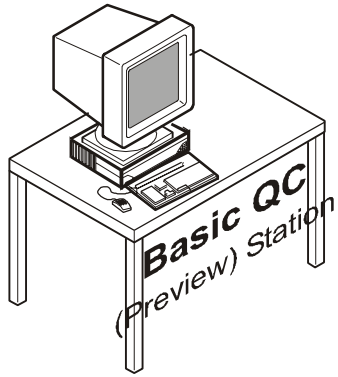
hostname:	**dry202**
ip_addr.:	**192.9.200.202**
subnet_mask:*	**<** **>**
default router:*	**<** **>**
AE_title:	**DRYSTAR3000**
StationName:	**Dry3000_202**



hostname:	**idrars1**
ip_addr.:	**192.9.200.103**
subnet_mask:	**<** **>**
default router:	**<** **>**
AE_title:	**AS1**
StationName:	**Impax_Arch_1**



Only partly configured via cpf-file!



*depends on the local network of the hospital.

1.2 Edit the Configuration File with the CCM Tool

- Start the CCM Tool on your Service PC by double-clicking the CCM Icon.
- Type in your name (used for history and session information) and confirm.
- Click button **<Create CPF from scratch>**.

If the left 3 buttons are disabled, you have to click **<CLEAR all tables>**.

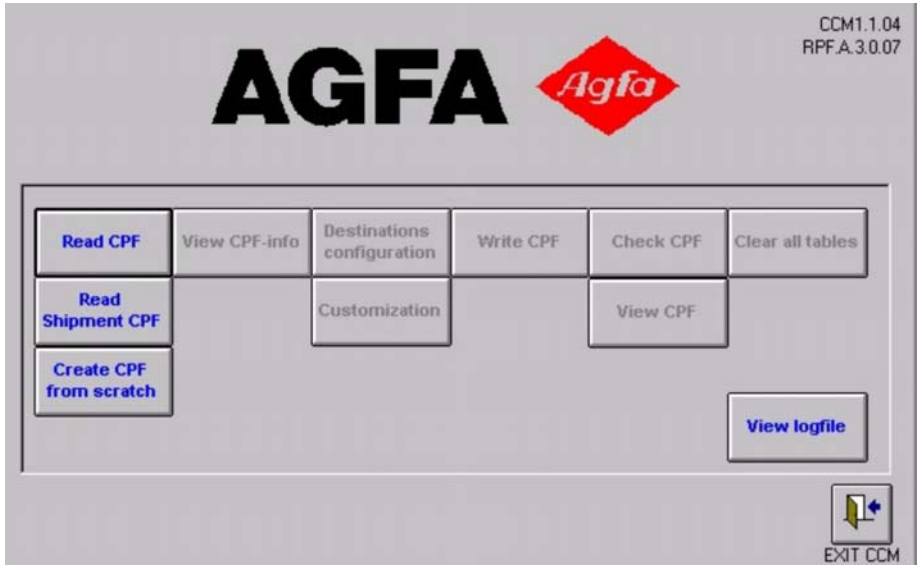


Figure 1

- Choose the RPF language (Language of the examinations) and confirm.

basic = English.

- Click button **<Destinations configuration>**.

1.2.1 Menu <Destinations Configuration>

Fill in the network parameters in the following sequences:
Installation of devices:
Network - Application - Devices.
Deinstallation of devices:
Devices - Application - Network

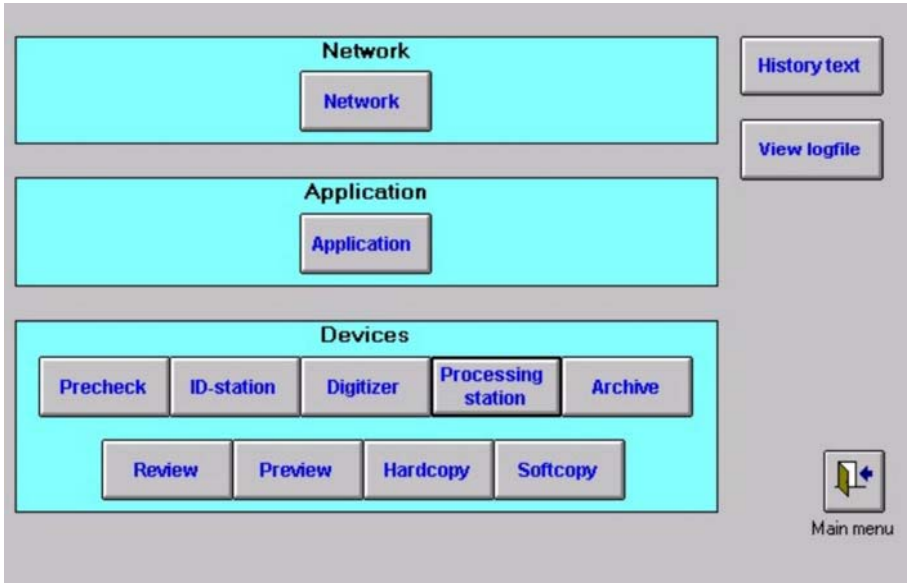


Figure 2

1.2.2 Menu <Network Hosts>

- Click button **<Network>**.
- Click button **<ADD>**.

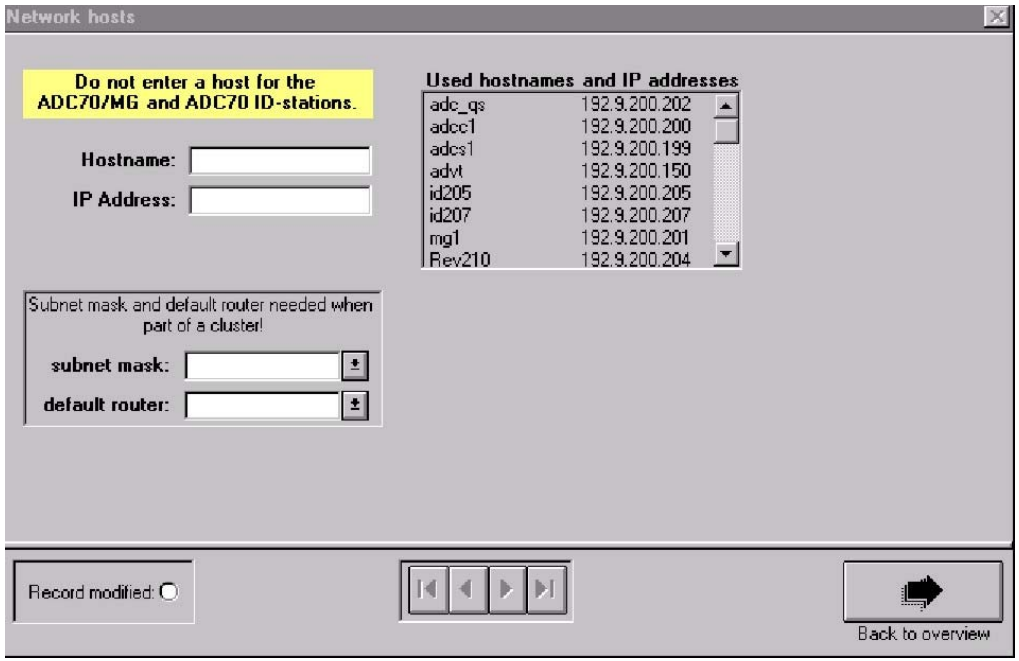


Figure 3

- Type in the network data (hostname, IP address and if required the subnet_mask and the default_router).
- Repeat this until all network components are added.
- Click button **<Back to overview>** (the data will be stored).

Example of a completely filled Menu

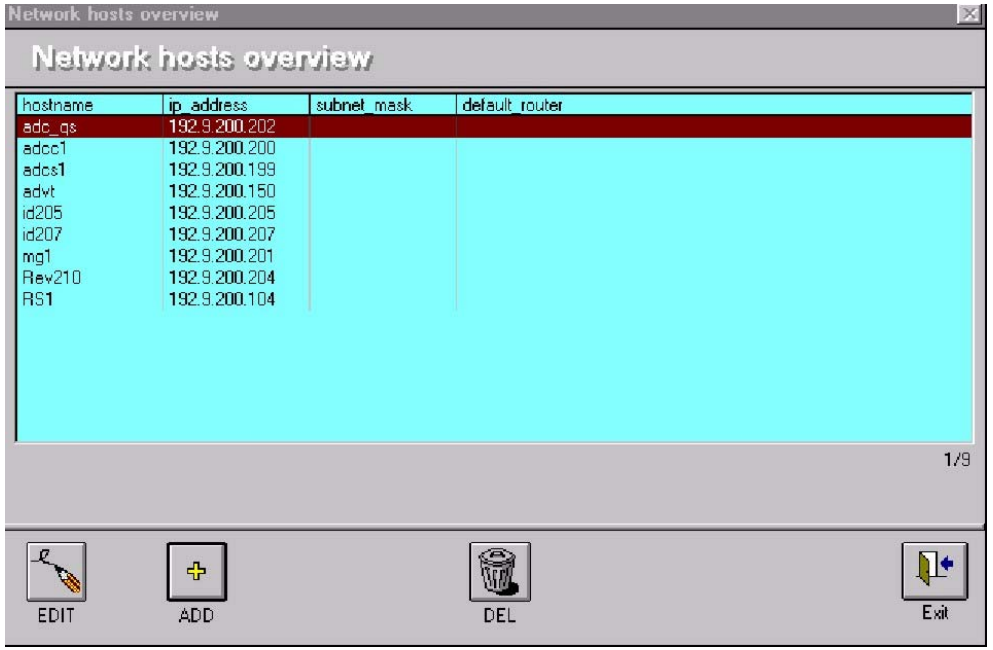


Figure 4

The data in the window are only examples.

- Click button **<Exit>**.

1.2.3 Menu <Application type Information>

- Click button **<Application>**.
- Click button **<ADD>**.

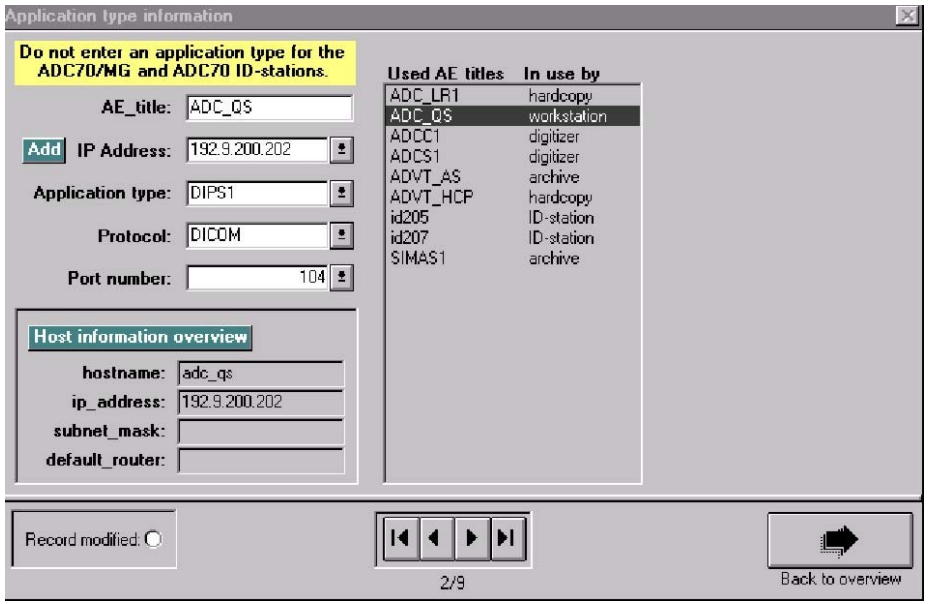


Figure 5

- Type in the AE_title.
- Select the belonging IP_adress.
- Select the belonging Application type (see table beside).
- Check the pre-determined Protocol and Port number or change it (see table beside).
- Repeat this for all network components.
- Click button **<Back to overview>**.

Example

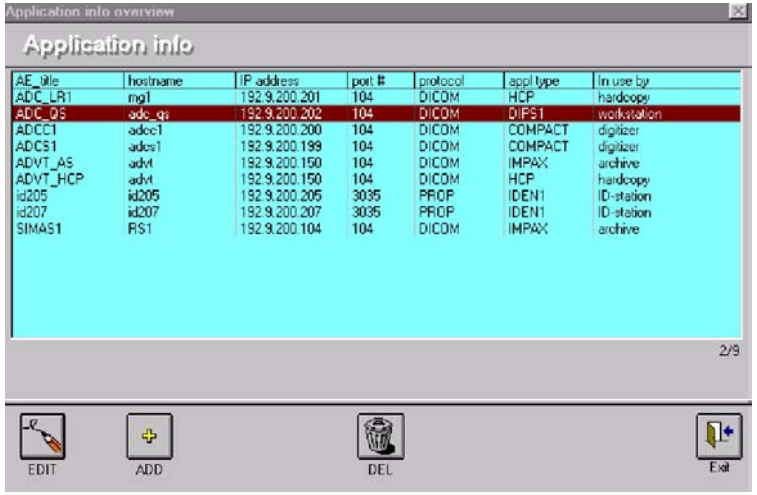

Application info overview
Application info
AE_title hostname IP address port # protocol appl type In use by
ADC_LR1 mg1 192.9.200.201 104 DICOM HCP hardcopy
ADC_QS adc_qs 192.9.200.202 104 DICOM DIPS1 workstation
ADCC1 adcc1 192.9.200.200 104 DICOM COMPACT digitizer
ADCS1 adcs1 192.9.200.199 104 DICOM COMPACT digitizer
ADVT_AS advt 192.9.200.150 104 DICOM IMPAX archive
ADVT_HCP advt 192.9.200.150 104 DICOM HCP hardcopy
id205 id205 192.9.200.205 3035 PROP IDEN1 ID-station
id207 id207 192.9.200.207 3035 PROP IDEN1 ID-station
SIMAS1 RS1 192.9.200.104 104 DICOM IMPAX archive
2/9
EDIT
ADD
DEL
Exit

Figure 6

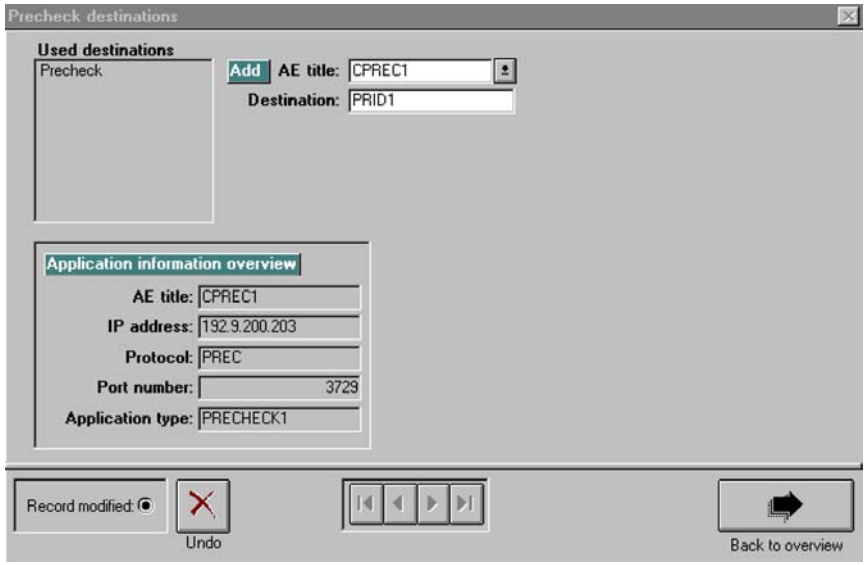
- Click button **<Exit>**.

Appl. types	Protocol	Port #	Comment
IMPAX	DICOM	104	archive for AGFA NWG
IMPAX	DICOM	depends on destination	review for 3rd party stations only
HCP	DICOM	104	Hardcopy destination type
SCP	NFS	0	Softcopy destination type
PS5000	DICOM	104	PS5000 applic.; only for ADC 70
COMPACT	DICOM	104	ADC COMPACT application
DIPS1	DICOM	104	Image processing workstation application
PREV1	PROP	3035	PREVIEW STATION application
IDEN1	PROP	3035	ID STATION application
PRECHECK	PREC	3729	Appl. type for fast preview

1.2.4 Menu <Precheck>

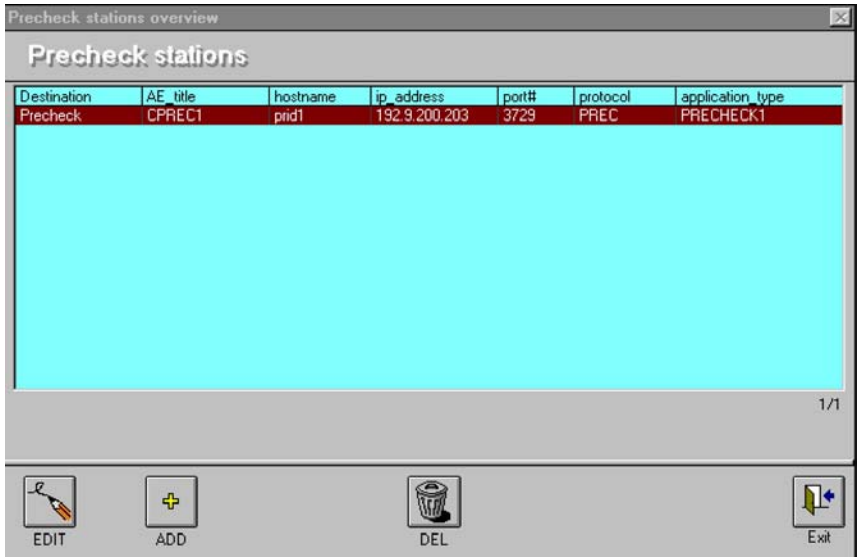
Precheck is only supported from PRID12xx, COP13xx, SOL12xx on.
Do not change anything for lower versions.

- Click button **<Precheck>**
- Click button **<ADD>**



- Select the Precheck Station via AE_title.
- Type in the destination name.
- Click button **<Back to overview>**.

Example



- Click button **<Exit>**.

1.2.5 Menu <ID-Station>- <Digitizer>- <Processing Station>

- Click button **<ID-Station>**
- Click button **<ADD>**

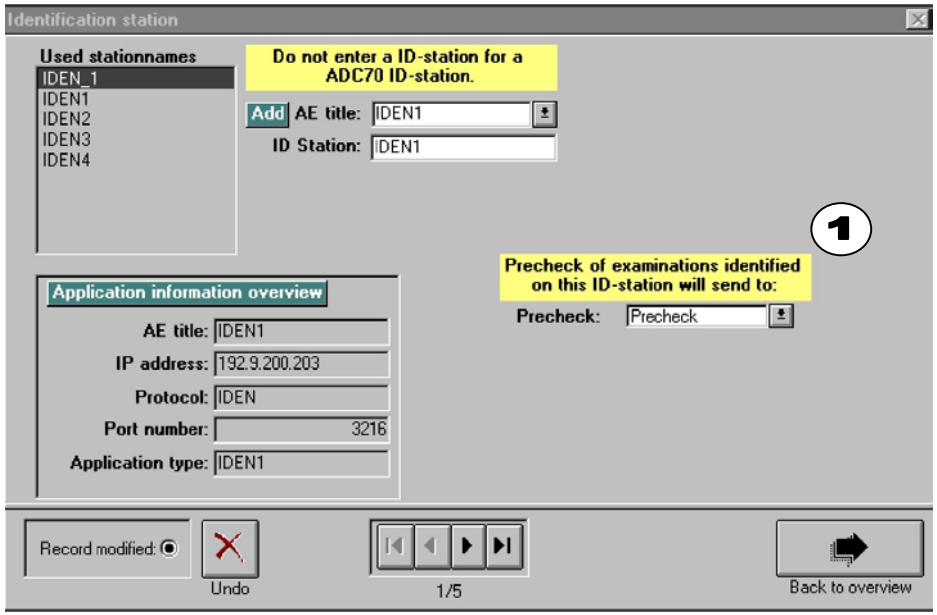


Figure 7

- Select the ID-Station via AE_title.
- Type in the IDStationName respectively the destination name.
- Repeat this for all ID-Stations.
- Click button **<Back to overview>**.
- Repeat the procedure for **<Digitizer>** and **<Workstation>**.

Example

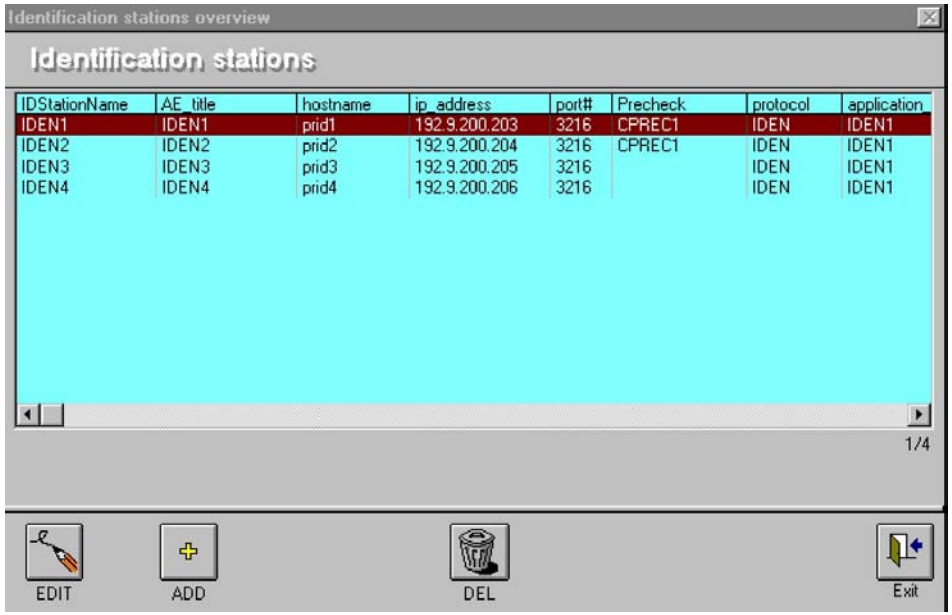

Identification stations overview
Identification stations
IDStationName AE_title hostname ip_address port# Precheck protocol application
IDEN1 IDEN1 prid1 192.9.200.203 3216 CPREC1 IDEN IDEN1
IDEN2 IDEN2 prid2 192.9.200.204 3216 CPREC1 IDEN IDEN1
IDEN3 IDEN3 prid3 192.9.200.205 3216 IDEN IDEN1
IDEN4 IDEN4 prid4 192.9.200.206 3216 IDEN IDEN1
1/4
EDIT
ADD
DEL
Exit

Figure 8

- Click button **<Exit>**.

(1) If you do not select any "Precheck" destination here, but "Fast Preview" is activated, the images will arrive on the ID-Station where the cassette was identified. This is the default setting.

1.2.6 Menu <Archive destinations>

- Click button **<Archive>**.
- Click button **<Add>**.

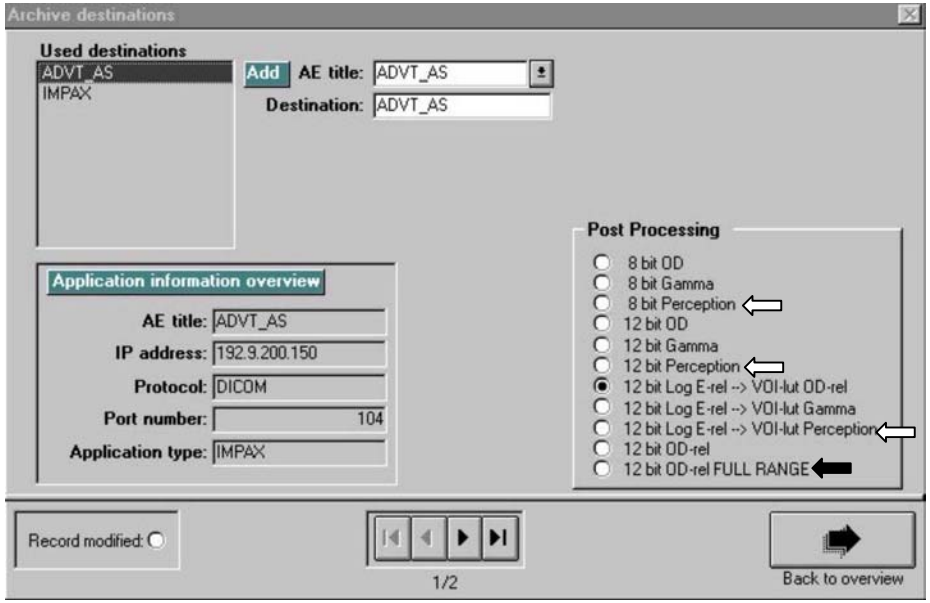


Figure 9

- Select the Archive Station via AE_title.
- Type in the Destination (name).
- Click button **<Back to overview>**.

The images have to be sent to a Network Gateway!

- **For IMPAX we recommend the following selections:**
- Pixel depth: **12 bits**.
- Image type: **LogE-rel**.
- OLUT: **LINEAR**

Example

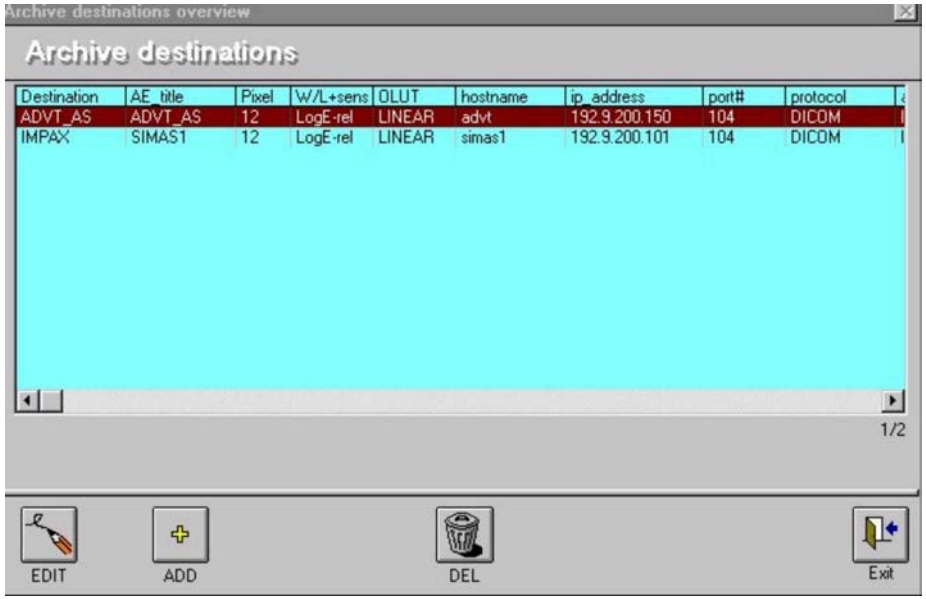


Figure 10

- Click button **<Exit>**.

"Perception Lut" (white arrows) only available from VIPS 12XX on. Do not select if you have a lower version.

"12bit OD-rel FULL RANGE" (black arrow) only available from VIPS 1.1.06 on

1.2.7 Menu <Review destinations>

- Click button **<Review>**.
- Click button **<Add>**.

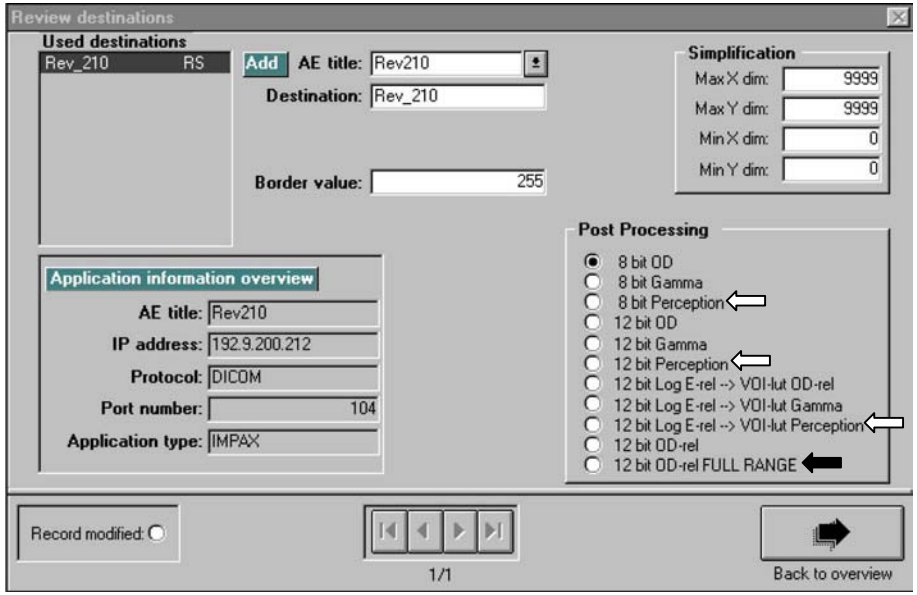


Figure 11

- Select the Review Station via AE_title.
- Type in the Destination (name) of the 3rd party device.
- Click button **<Back to overview>**.

ADC COMPACT --> IMPAX:

Do not send images directly to an IMPAX Review Station!

The images have to be sent to an IMPAX via a Network Gateway module. The routing has to be done by the NG.

ADC COMPACT → 3rd Party:

Ask the local system administrator or better the project responsible.

- **Selections for IMPAX:**

Pixel depth:	12 bits	**Min X/Y dim:**	0
Image type:	LogE-rel	**Max X/Y dim:**	9999
OLUT:	LINEAR		

Example

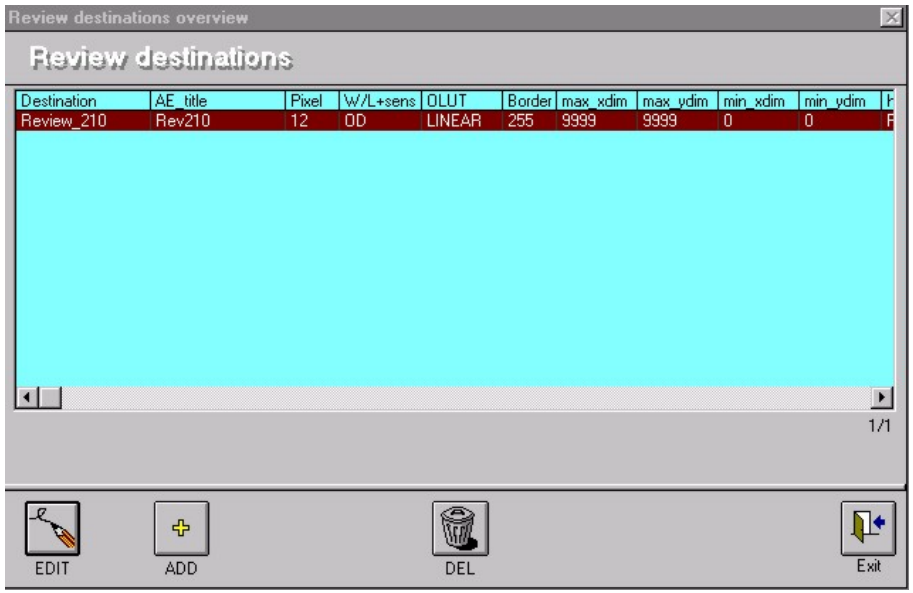


Figure 12

- Click button **<Exit>**.

"Perception Lut" (white arrows) only available from VIPS 12XX on. Do not select if you have a lower version. "12bit OD-rel FULL RANGE" (black arrow) only available from VIPS 1.1.06 on

1.2.8 Menu <Preview destinations>

- Click button **<Preview>**.
- Click button **<Add>**.

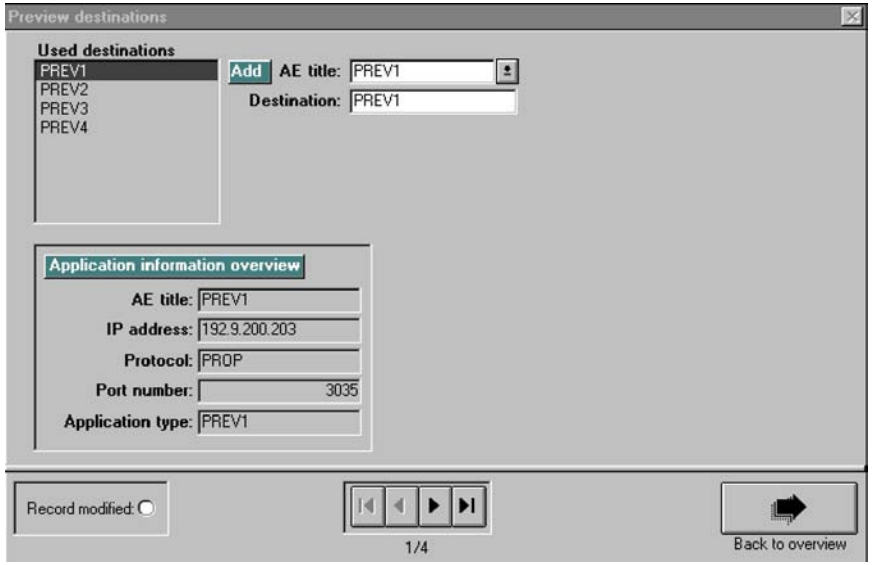


Figure 13

- Select the Preview Station via AE_title.
- Type in the Destination (name).
- Click button **<Back to overview>**.

Example

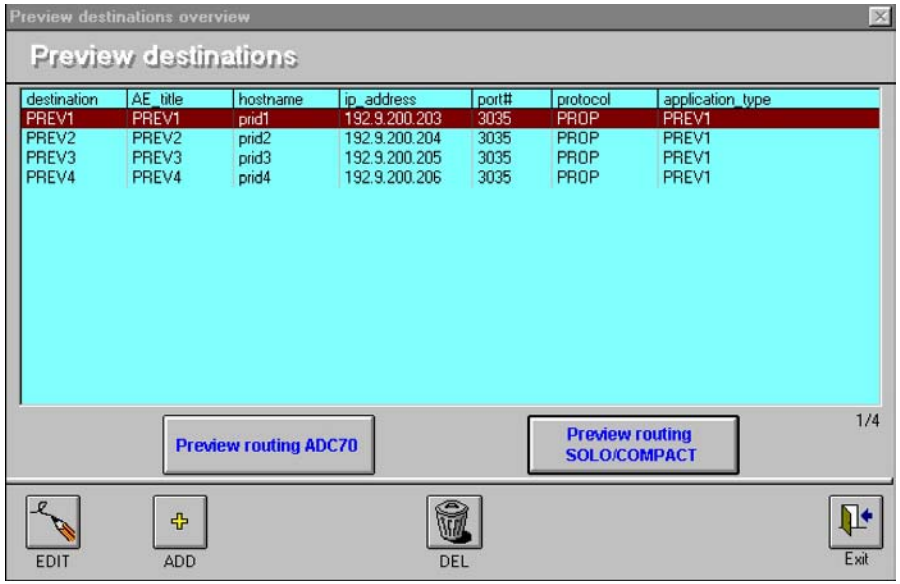


Figure 14

- Click button **<Preview SOLO/COMPACT>**.

1.2.9 Menu <Preview routing for ADC2F1>

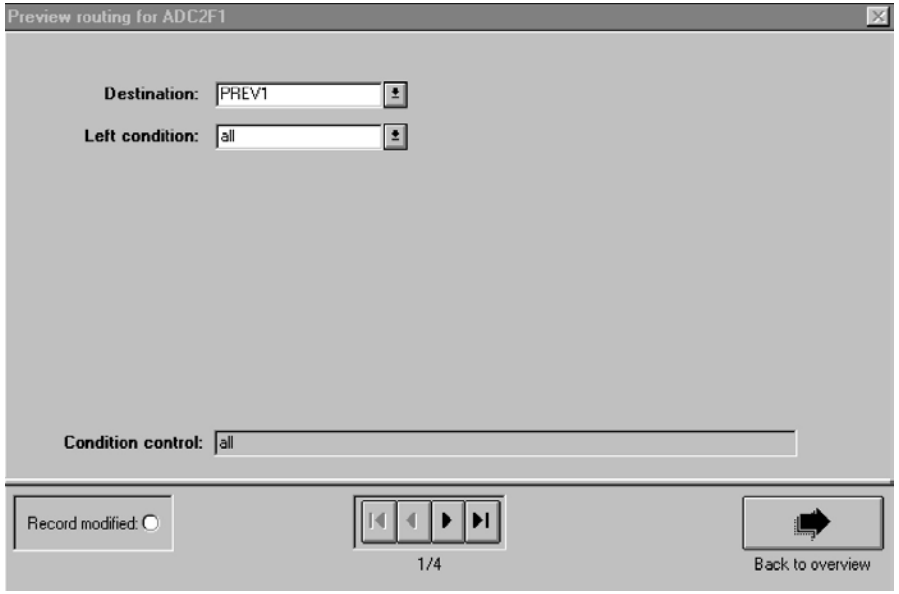


Figure 15

- Recommended selection:
  - Select the Preview–Destination.
  - Select **all** in field **<Left condition>** .

The text in the field "Condition" appears after the record was modified.

  - Click button **<Back to overview>**.

All other routing conditions have to be done by the application specialist.

Example

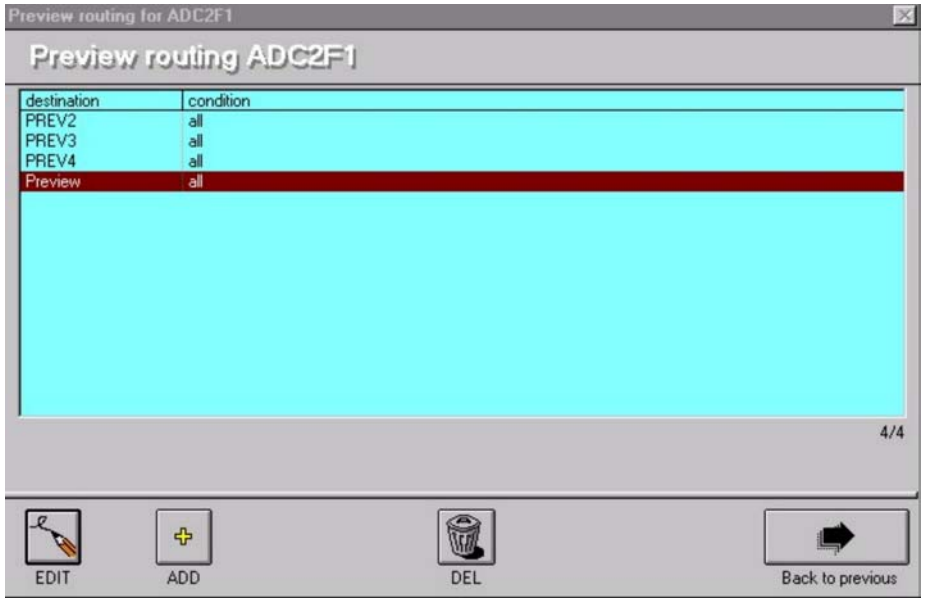


Figure 16

- Click button <Back to overview>.
- Click button **<Exit>**.

1.2.10 Menu <Hardcopy destinations>

- Click button **<Hardcopy>**.
- Click button **<Add>**.

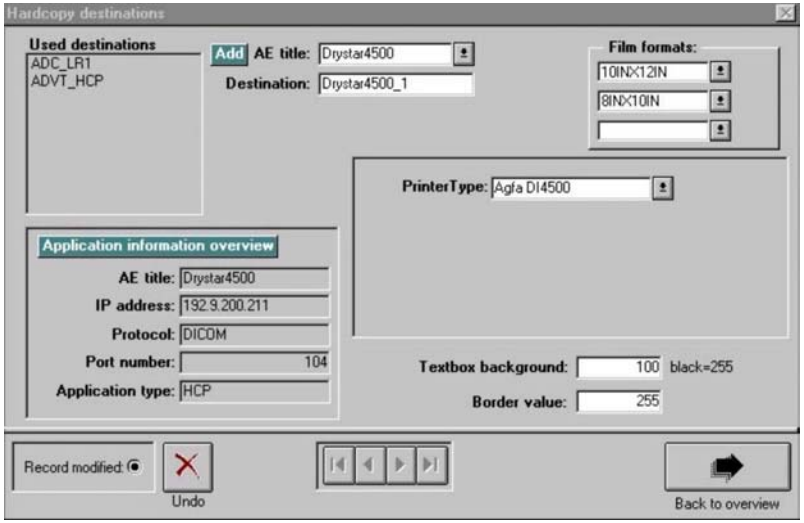


Figure 17

- Select the Hardcopy Destination via AE_title.
- Type in the Destination (name).
- Select a "Printer Type" from the list of available printers.
  (see appendix 1: supported printers, at the end of this document).

Two cases are possible:

a) Printer is in the list

(The printer list is updated regularly. Please keep yourself informed!)

- select a printer
- select the "film formats" you want to use
- click **<Back to overview>**

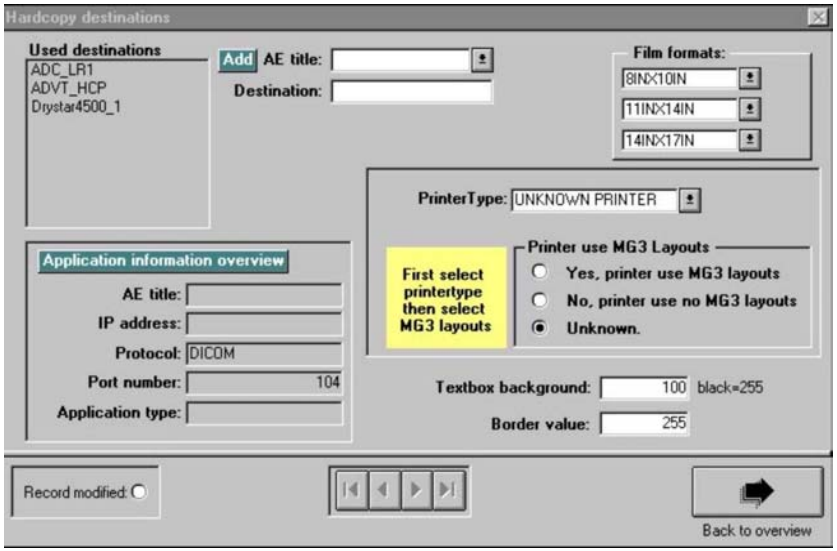


Figure 18

b) Printer is not in the list ("Unknown Printer")

If you specify a printer which is not in the list (i.e. "Unknown Printer") you need a parameter file, which has to be downloaded to the Processing Station. This parameter file contains printer specific parameters. Each of these printer parameter files has to be verified and released by AGFA before you are allowed to connect a printer of that type.
In that case please contact one of the GSCs for further assistance.

- Click **<Exit>**.

1.2.11 Menu <Softcopy destinations>

- Click button **<Softcopy destination>**.
- Click button **<Add>**.

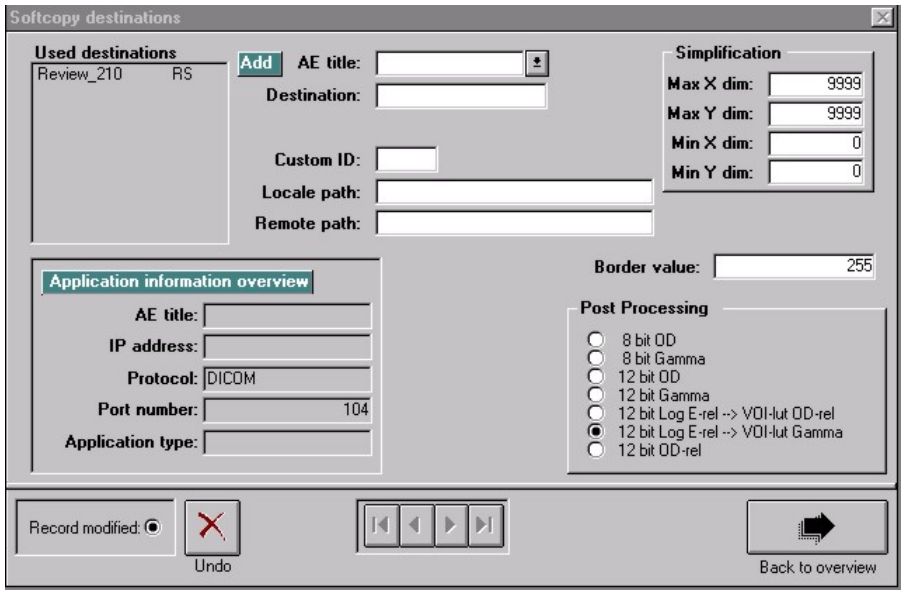


Figure 19

- Select the Softcopy destination via AE_title.
- Type in the Destination (name).
- Click button **<Back to overview>**.
- Click button **<Exit>**.
- Click button **<Main menu>**.

The further softcopy configuration has to be done by the application specialist.

1.2.12 Finish Configuration

- Click button **<Site data>**.

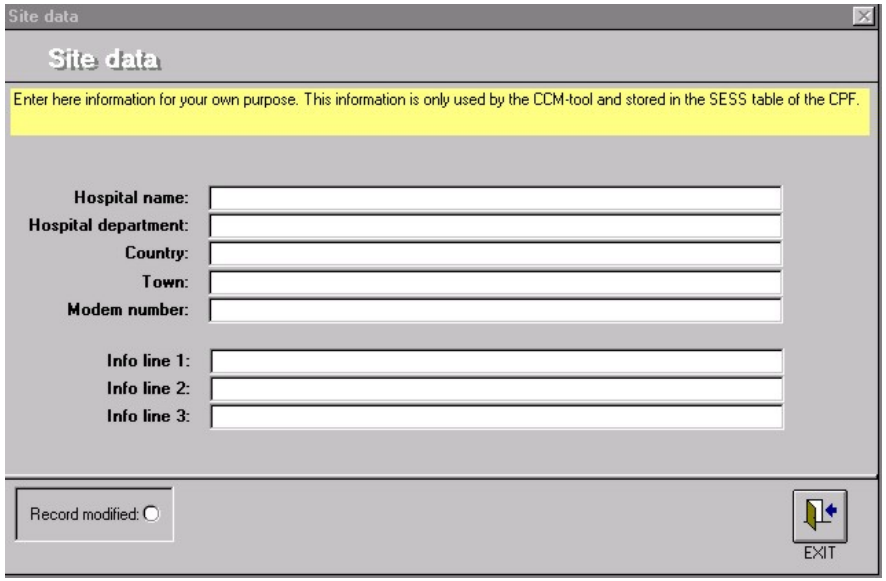


Figure 20

- Type in the site data.
- Click button **<Exit>**.

- If you want to add any comments, click button **<History text>**.

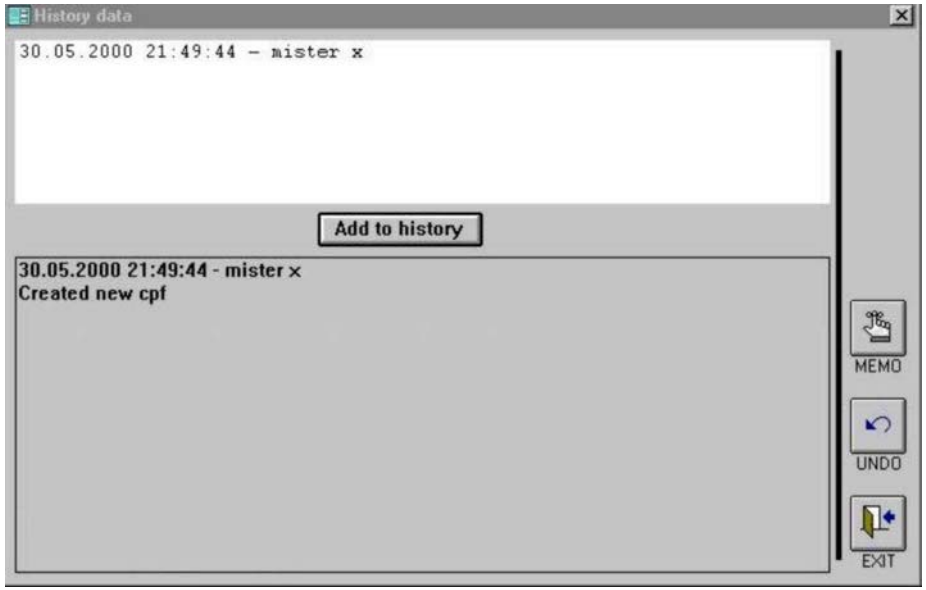


Figure 21

- Click button **<Add to history>**.
- Type in your comments.
- Click button **<Exit>**.
- Click button **<Main menu>**.
- Click **<Write CPF>** and select drive a:\ to save the file **adc.cpf** to the floppy.
- Click **<Clear all tables>** (clears PC memory).
- Click **<Exit CCM>** to close the CCM tool

Order No.: DD+DIS245.01E

1 Piece UR8A8 MA1

ADC Quality System

Type 4406/421

Chapter 3.2

Supported Printers

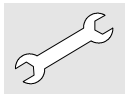
Printers	Corresponding ppd-files
AGFA DI2000	**AGDI2000.ppd**
AGFA DI3000	**AGDI3000.ppd**
AGFA DI4500	**AGDI4500.ppd**
Agfa Drystar SI100	**AGSI1001.ppd**
Agfa Drystar SI400	**AGSI4001.ppd**
AGFA LR3300	**AGLR3300.ppd**
AGFA LR5200	**AGLR5200.ppd**
KODAK IM8100	**KDIM8100.ppd**
KODAK IM8300	**KDIM8300.ppd**
KODAK IM8500	**KDIM8500.ppd**
KODAK IM8600	**KDIM8600.ppd**
KODAK IM8700	**KDIM8700.ppd**
KODAK KELP1120	**KDLP2180.ppd**
KODAK KELP2180	**KDLP2180.ppd**

The printers **Agfa Drystar SI100** and **Agfa Drystar SI400** can be installed as normal DICOM printers and it is not necessary to install them as PS printers. **Before** upgrading to version 2.0.08 you have to delete them as PS printers and install them after the upgrade with the correct ppd-file as DICOM printers.

For having **all film formats available** it is necessary that the new film format coding is used. When the old film format coding (the named 700-numbers) is used, not all possible film formats are available.

For having the new film format coding available, the following **Software prerequisites** are necessary:

PRID 1.2.09
CCM 1.1.06



Chapter 3.2

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Supported Printers DD+DIS245.01E

Creation and Adaptation of the Configuration File cpf (Version 11xx) DD+DIS246.01E

1 Configuration Viewer

The Configuration Viewer is the tool on ADC QS to change or modify the configuration of the system.
The configuration data is handled centrally on the server. At the moment, most of the fields in configuration viewer are read only fields, as the system is mainly configured by means of the cpf-file.

1.1 Start-up of Configuration Viewer

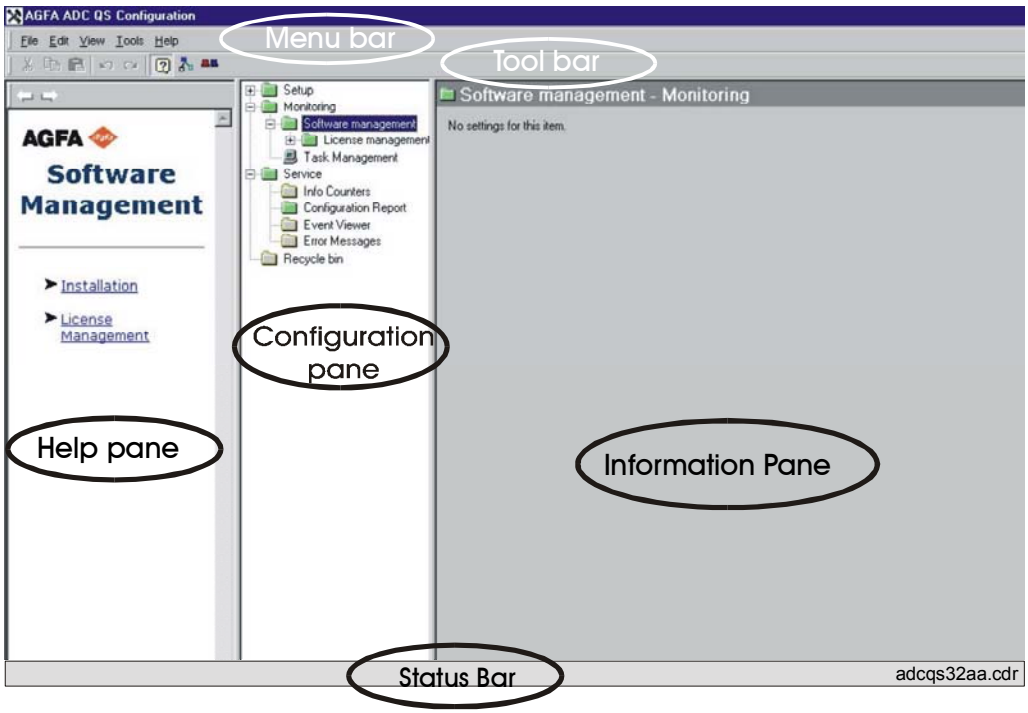
(1) Select
`<Start>`
`<Agfa>`
`<Adc-qs>`
`<Configuration>`

adcqs12

`Login` window appears.

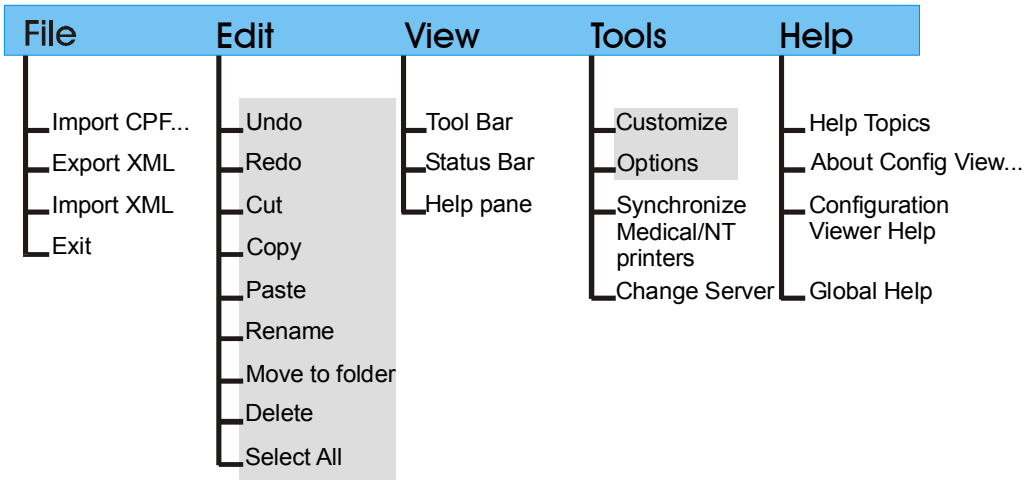
(2) Click `<OK>` to login

1.2 Configuration Viewer: Start Screen



Menu bar	A dropdown menu shows the contents of each menu ("mouse over" effect).
Tool bar	Several icons offer a convenient way to call up software functions.
Help pane	An extensive online help explains the software functions.
Configuration pane	It displays the file structure of configuration viewer.
Information pane	It offers a multitude of configuration measures.
Status bar	It displays information on the currently run program.

1.3 Configuration Viewer: Menu Structure



= these functions are not implemented yet

adcqs32ab.cdr

1.4 Configuration Viewer: Explanation of Menu Functions

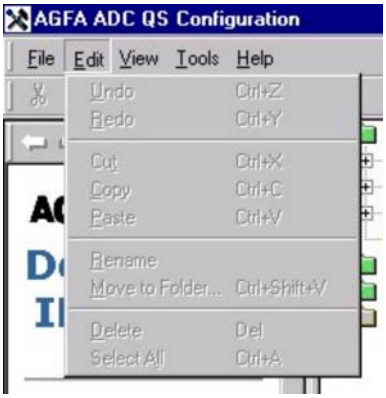
The following chapter gives a short survey of the structure in configuration menu.

File:

- imports the cpf-file from floppy or hard disk.
- exports configuration data into XML-file.
- imports configuration data from XML-file.
- closes configuration viewer.

Edit:

- these functions are not implemented yet

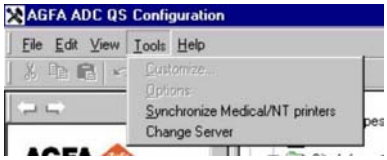


View:

- displays/hides tool bar
- displays/hides status bar
- displays/hides help pane (online help)

Tools:

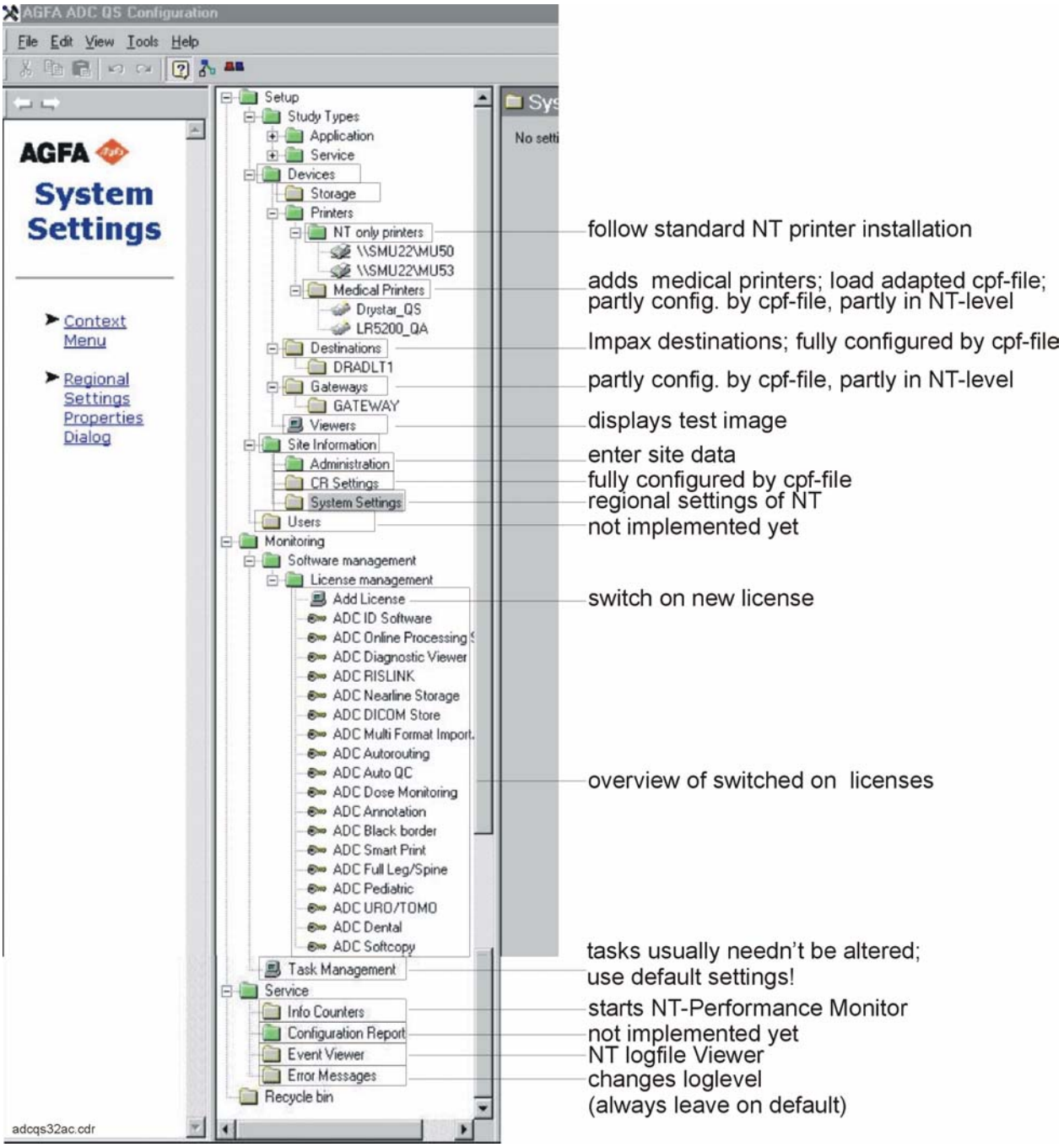
- customize (not implemented yet)
- options (not implemented yet)
- installing and configuring NT and DICOM printers.
- allows changing the Server Station to connect to.



Help:

- index of help topics
- info on Configuration viewer
- help on Configuration viewer
- general help topics

1.5 Configuration Viewer: File Structure Configuration Pane



2 Creation of an ADC QS Restore CD

2.1 General

To create on site a bootable Restore CD-ROM makes it possible to restore the server system at a later date back to the same identical state as it was by creation of the CD. Please pay attention to the following points:

- The CD must only be used on the PC where it was created!
- A Restore CD covers only a image of the first hard disk (partition C, E and F) the second hard disk is not saved.
- It is not possible to create a Restore CD on the Client Station with a server Reboot CD!
- During the process the CD tray can open and close automatically; this is then part of the procedure.

2.2 Requirements

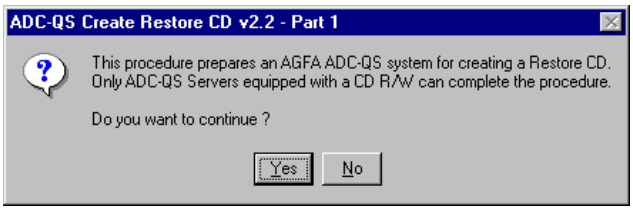
- CD-ROM ADC-QS Restore Toolkit CD
- Blank or rewriteable CD

2.3 Procedure

(1) Insert the ADC QS Restore Toolkit CD in the CD-ROM drive.

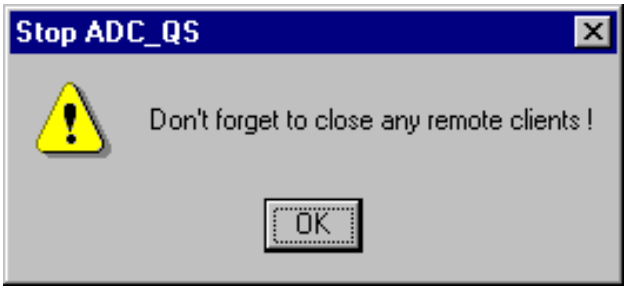
The CD starts automatically. If it does not start automatically, open file `<Make_cd.bat>` of the CD.

(2) `<Create Restore CD>` window appears.


ADC-QS Create Restore CD v2.2 - Part 1
This procedure prepares an AGFA ADC-QS system for creating a Restore CD.
Only ADC-QS Servers equipped with a CD R/W can complete the procedure.
Do you want to continue ?
Yes
No

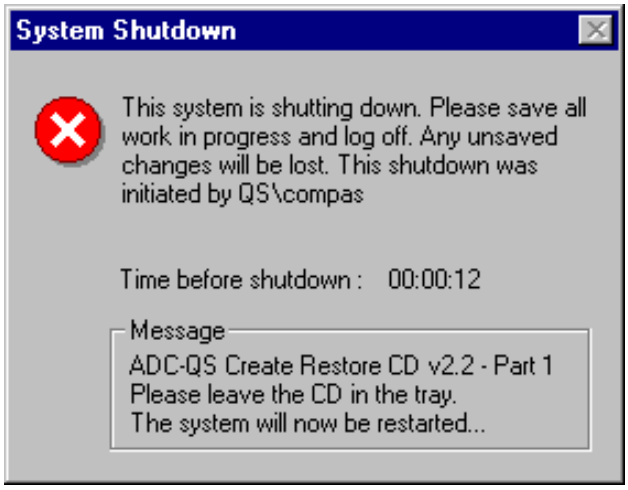
Click `<Yes>`

(3) Warning to close any existing ADC QS sessions appears.

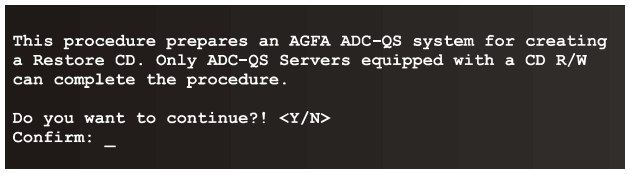


Click `<OK>`

(4) System shuts down.


System Shutdown
This system is shutting down. Please save all work in progress and log off. Any unsaved changes will be lost. This shutdown was initiated by QS\compas
Time before shutdown : 00:00:12
Message
ADC-QS Create Restore CD v2.2 - Part 1
Please leave the CD in the tray.
The system will now be restarted...

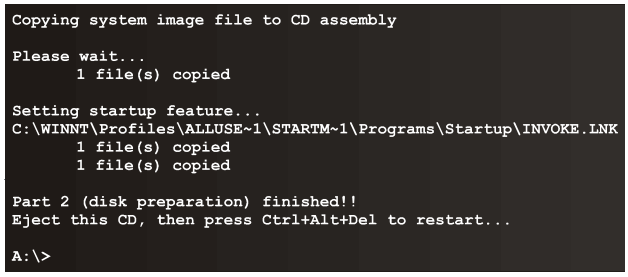
(5) Wait until DOS window appears


This procedure prepares an AGFA ADC-QS system for creating a Restore CD. Only ADC-QS Servers equipped with a CD R/W can complete the procedure.
Do you want to continue?! <Y/N>
Confirm: _

Type in <Y> or wait until it is inserted automatically after a few seconds (Y corresponds to an American keyboard !)

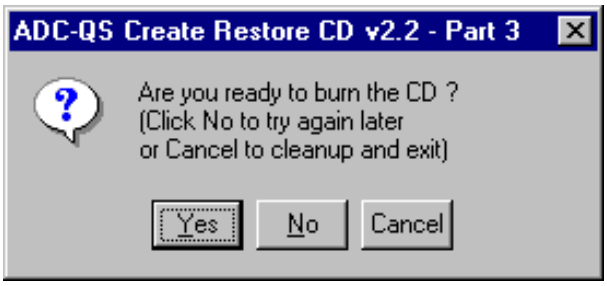
(6) Symantec Ghost program starts automatically and creates a system image of hard disk 1

(7) Wait until DOS window appears



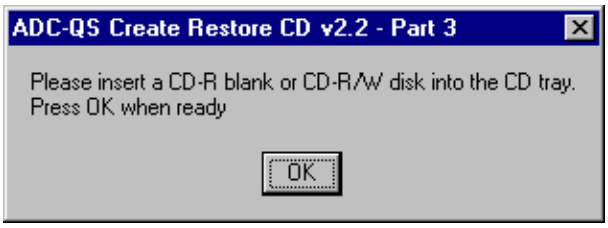
Eject the ADC QS Restore Toolkit CD and press <Ctrl+Alt+Del> to restart the system

(8) Wait until the scanning for CD Writer is finished and the selection window appears


ADC-QS Create Restore CD v2.2 - Part 3
Are you ready to burn the CD ?
(Click No to try again later
or Cancel to cleanup and exit)
Yes
No
Cancel

Click <Yes>

(9) Insert CD-R window appears.



Insert blank CD and click <OK>

(10) Various windows show progress.

(11) Eject the recorded CD and write

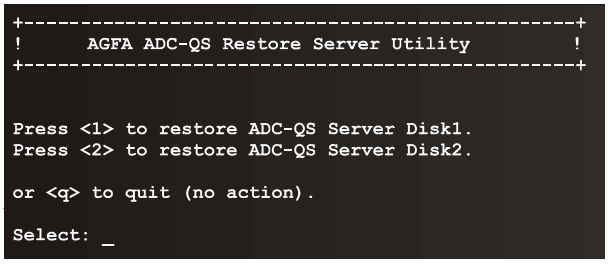
- “ADC-QS Server Restore CD”
- Date of creation
- Software version
- Creator of the CD

on it.

2.3.1 Testing the recorded Restore CD

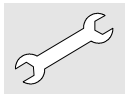
(12) Insert the Restore CD and restart the system

(13) DOS selection window appears


+---+
! AGFA ADC-QS Restore Server Utility !
+---+
Press <1> to restore ADC-QS Server Disk1.
Press <2> to restore ADC-QS Server Disk2.
or <q> to quit (no action).
Select: _

Type in <q>
(For testing it is not necessary to carry out a restore procedure)

If the window does not appear, first check the boot sequence before creating a new Restore CD.



Chapter 3.3

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1 Open Issues in ADC QS 2.0.08

Birth date field is empty
When birth date field is not entered in PRID then the field remains empty in ADC QS (no default date is put in).

Study info in selector only shows info about first image of study
When the user selects a record in the list view pane and goes to study info via the tools menu, only the info about the first image is visible. It is not possible to access the info for the other images.

Print Composer printing
When printing from Print Composer no “Done” status for printing is shown in List View Pane.

Tasks interrupting by “Deactivate” button may hang up tasks
When status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

ACCESS_VIOLATION error
If an image is deleted on one of the QC viewers the thumbnail of a deleted image remains and an ACCESS_VIOLATION error occurs. To get rid of this thumbnail refresh by using the “F5” key or closing ADC QC viewer and opening again.

Textbox field is not updated automatically
If the default Print Textbox is used, it does not show examination name on the hardcopy. In the default textbox the correct field `ICRProcedureStepDescription` has been changed to `IProcedureDescription`, which is an empty field in the BOExplorer. The consequence is that instead of the correct data there is now an empty space when you apply the default Print Textbox. Workaround: If the default Print Textbox is used, the field `IProcedureDescription` must be changed manually to `ICRProcedureStepDescription`.

Windows application not able to close while ADC QS is running
When ADC QS is running on a server and you open a window application e.g. the control panel to change date / time, you can not close the application anymore. It stays open as long as the ADC QS is running. By stopping the ADC QS the application is also closed and the changed settings are stored.

Task manager shows QC Phantom task to be ACTIVE
The QC Phantom task can be ignored. It is not available in ADC QS 2.0.08.

Refreshing task manager status
Changed status of the task manager screen is not refreshed automatically. Workaround: To see the actual status, leave the task manager and open it again.

Basic QC viewer sometimes not auto refreshed
Basic QC viewer is sometimes not refreshed automatically. Workaround: Use “F5” key to refresh screen.

Text field entries are reset to default
Demographic data to be displayed under images and thumbnails are reset to default after leaving the application.

Slightly slow display on Client
Display of images and other actions are slightly slower on ADC QS Client PC than on Server.

Difficult identification of print jobs in NT Spooler queue
In the NT Print Spooler it is difficult to identify a print job. If the print job is created by “autoprinting” the patient name is used as print job name; if it is created by interactive printing (Quick Print, Print Composer) only the layout number is visible.

Exporting of GUI
Part of the Graphical User Interface (GUI) cannot be copied and exported to other servers and clients (e.g. toolbar configuration).

Toolbar configuration
Toolbar configuration is lost after the upgrade procedure. The toolbar configuration is not stored per user.

Magnification value on hardcopy
“Magnification value” should not be used, because the value is incorrect. It is not possible to show the correct scaling factor of an image on a hardcopy at the moment.

Burn function
Inversion from black to white does not work proper all the time. Lost energy regions are indicated as black, not black and white (white is inverted, black is not inverted).

Cut off ruler on hardcopy
It is possible to print a ruler on a hardcopy, but if it is printed in true size and this size is larger than the printable area, the ruler will be cut off.

Correction of demographic data
It is not possible to correct demographic data in Basic QC viewer.

Image quality bad
Image quality after transmitting a manually window leveled image to Impax can be bad on Impax version 3.5 in some cases.

Transmission to Impax fail
Manual transmission to Impax fails if started from the dialog box that states that a transmission is ongoing. The status of the transmission is not set to "done" so the user can see that it was not successful and retry.

Film media type can not be changed
The film media type is always blue base, in case a change is needed contact GSC.

Images of one studies are put into two different folders
This problem may occur in the following occasions:

- A study of two or more images is created on PRID. There is a delay of the entering the cassettes in the digitizer which is greater than the IN_PROGRESS timeout.
- A study with more than two images on the PRID is created. The first image arrives at the QC viewer and it is rejected by the user. The second images which arrives on the QC viewer is then put into a different folder then the first one. The third and all later images coming in are again put into the first folder, but never appear on QC viewer! You have to change to IPD to view all of the images.

2 What is new in ADC QS 2.0.08?

- The reliability of the system increased considerably
- Up to three clients can be connected to one server
- Local languages available (English, French, Dutch, Spanish, German, Portuguese, Swedish)
- New supported printers (see appendix)
- Quick print stability is increased
- The collimation functionality improved
- Disk monitor behavior changed – rejected studies will not be reclaimed as first anymore, but are handled as if they were verified studies that were routed and printed
- Problem with storing of view position in database is resolved (AP/PA)
- Problem with mirroring of images on IMPAX is resolved

3 Tips & Tricks for ADC QS 2.0.08

3.1 Installation

- **Printers on a client** system should be installed through the NT 'Add printer' wizard. 'Synchronize printers' is not available in the ConfigViewer on client systems.
- The ADC QS application must be **stopped** before **installing printers**.
- The **Adobe wizard** has to be stopped after each printer installation (i.e. on the server).
- The printer setting should be set to **spool the print job** before print.

- The **Agfa Drystar SI100** and **Agfa Drystar SI400** can be installed as normal DICOM printers. Before upgrading you have to delete them as PS printers and install them after upgrading with the correct ppd-file as DICOM printers.
- If a **printer configuration failed** for whatever reason go on that way:
  - Check that printer queue is really empty
  - Remove the printer from the cpf-file
  - Stop ADC QS
  - Start only Configuration Viewer
  - Import cpf-file
  - Remove the printer from NT-Printer settings, if it is still there
  - Add the printer again to the cpf-file and import the cpf-file again
  - Start printer configuration again and follow exactly the instructions!
- Layouts like 10INx12IN on DI4500 are called **New Vips layouts** or **no-MG3 layouts**. These layouts can be generated only if the cpf-file supports them. The table PS in the cpf-file needs to be changed : set **all_film_format_printing = 'Y'** for each ADC-QS server which has to support the New Vips layouts. This cpf must be installed on the PRID (12.09) which converts the exam related film layout.
- Cassette related hardcopy layouts are still supported as long as PRID is used to identify cassettes.
- The full ADC QS application should be started to make th **backup** task work.
- The display setting should be set to TRUE COLOR to make the **gateway** work properly.
- The **Regional Settings Properties** should be checked, that the decimal symbol is a point and the digit grouping symbol is a comma. Other settings cause problems by viewing with IMPAX.
- When **licenses** are gone during normal operation, select the option 'Restore Licenses' in the Startup->Agfa->ADC-QS->Tools menu.
  When new licenses are added or removed after delivery from production, make a backup of the licenses by selecting the option 'Backup Licenses' in the Startup->Agfa->ADC-QS->Tools menu.
- If **backup task** from task manager is executed it may take up to 10 minutes. Time depends on the number of images. The system gives no feedback if backup task is running. You can check the progress at NT Explorer directory J:\BackupCompas; as long as the file size is growing the backup is running.

3.2 Task Manager

General

- Some tasks allow freely editing and deleting of its parameters. If these parameters are removed (by a wrong user operation), it is very hard to find back the correct parameter names. Therefore we recommend **not to edit the task parameters at all**. The default parameters are the tested ones and guarantee a proper working of the system!

If you are faced to a problem where a change of the settings may be necessary please **first contact an expert** (GSC).
If settings are already changed and the system does not run proper, please contact an expert (GSC).

- If status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

- The Configuration Viewer task manager does not update the status of a task when it changes. The only way to verify if a task is still running is in the NT-task scheduler.

- A task only works when server is running. Editing a task while the server is not running gives an error which can not be bypassed. In order to be sure that the server is running reset ADC QS Software, also if a problem occurs reset the ADC QS Software.

QC Phantom task

- The task manager lists QC Phantom task as ACTIVE, but this task is INACTIVE. This task is not implemented and can not be edited.

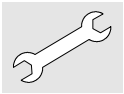
3.3 Troubleshooting

- **Locked File Problem after upgrade from Web Admin**
  If during an installation you receive the error message 'An error occurred during the data move process - 115', then a program file is currently locked by the system and can't be replaced. To rectify this, stop the following services from the Control Panel::Services applet:
  Spooler
  World Wide Web Publishing Service
  Now retry the installation. It should now work as the program files are in the unlocked state.

- **Permissions Problem:**
  At present, you should have **local machine Administrator** privileges to install ADC-QS. This means you must install under ***Administrator*** account or the ***compas*** account must be a member of Administrators group. The compas account is added to Administrators group during the Server installation.
  Without Administrator privileges may experience the locked files problem described above. Also you won’t be able to set up any local printers on the system.

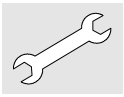
- **Missing Configuration:**
  If for some reason the configuration settings are missing, you can run the ***Restore*** task to recover them (assuming you did back a backup originally). From the configuration viewer – select **Restore** from the list, click <Modify>, ensure field 'OnlyRestoreConfig' is set to 1 (one). Click <OK>. Click now on <Activate> if the task is INACTIVE, then click <Execute>.

  The settings are restored. Click on desktop button 'Reset ADC-QS' to activate the restored settings.
- **Images Not Visible:**
  If for some reason the images are not visible, you can run the ***Restore*** task to recover them (assuming you did back a backup originally). From the configuration viewer – select **Restore** from the list, click <Modify>, ensure field 'OnlyRestoreConfig' is set to 0 (zero). Click <OK>. Click now on <Activate> if the task is INACTIVE, then click <Execute>. The settings and data are restored. Click on desktop button 'Reset ADC-QS' to activate the restored settings.
- **Printing Problems from Client**
  In case of printing problems from client check:
  - Printer has to be installed as a NT network printer on the client station. Print server has to be the ADC QS server.
  - Check `System monitoring`
    `Network`
    `Protocols`
    Here you must find ‘TCP/IP-Protocol’ and ‘NetBEUI Protocol’.
- **Wrong window level values**
  Window level values are wrong if the “Regional Settings Properties” are incorrect. Check that that the `Decimal symbol` is a point and the `Digit grouping symbol` is a comma at the tab “Number”.
- **“Layout” and “TextBox” Editor at “Tools” menu**
  The “Layout” and “TextBox” Editor are now to find at the “Tools” menu in the main menu bar.
- **Uninstaller setup failed to initialize**
  During installation the message “Uninstaller setup failed to initialize. You may not be able to uninstall this product." pops up. This prevents the “Uninstall” button from being created in the Add/Remove Programs applet and the application normally cannot be uninstalled.
  This occurs because the Uninst.isu file in the install target folder (that is the location where you are installing to) has become corrupt. To remedy this, you need to delete all files in the install target folder, and try again.



Chapter 3.4

Chapter 3.4 is not applicable to ADC QS 2.0.xx



Chapter 3.5

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1 Using the Restore CD for ADC QS Server

Only possible for the ADC QS Server at the moment.

1.1 When to be used

The Restore Procedure is an emergency procedure in case a hard disk on the server is corrupted and has to be changed.

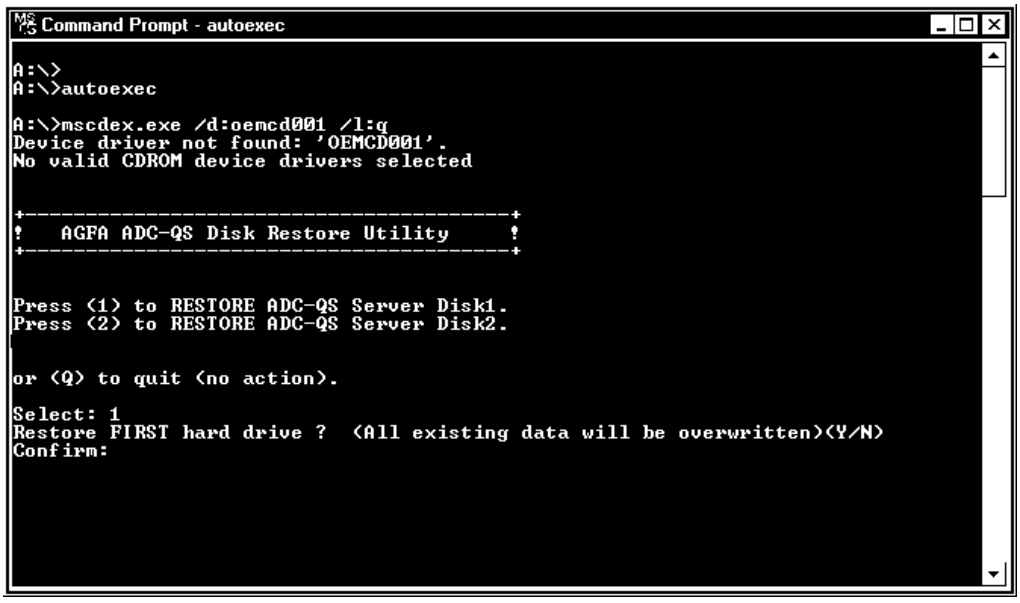
Two scenarios can be tackled:
- ADC QS Server system disk crashed
- ADC QS Server image disk crashed

1.2 Contents of the CD

The Restore CD contains two disk images:
- Image for ADC QS Server Disk 1 (system)
- Image for ADC QS Server Disk 2 (image data)

1.3 Restore Procedure

The Restore CD is bootable!

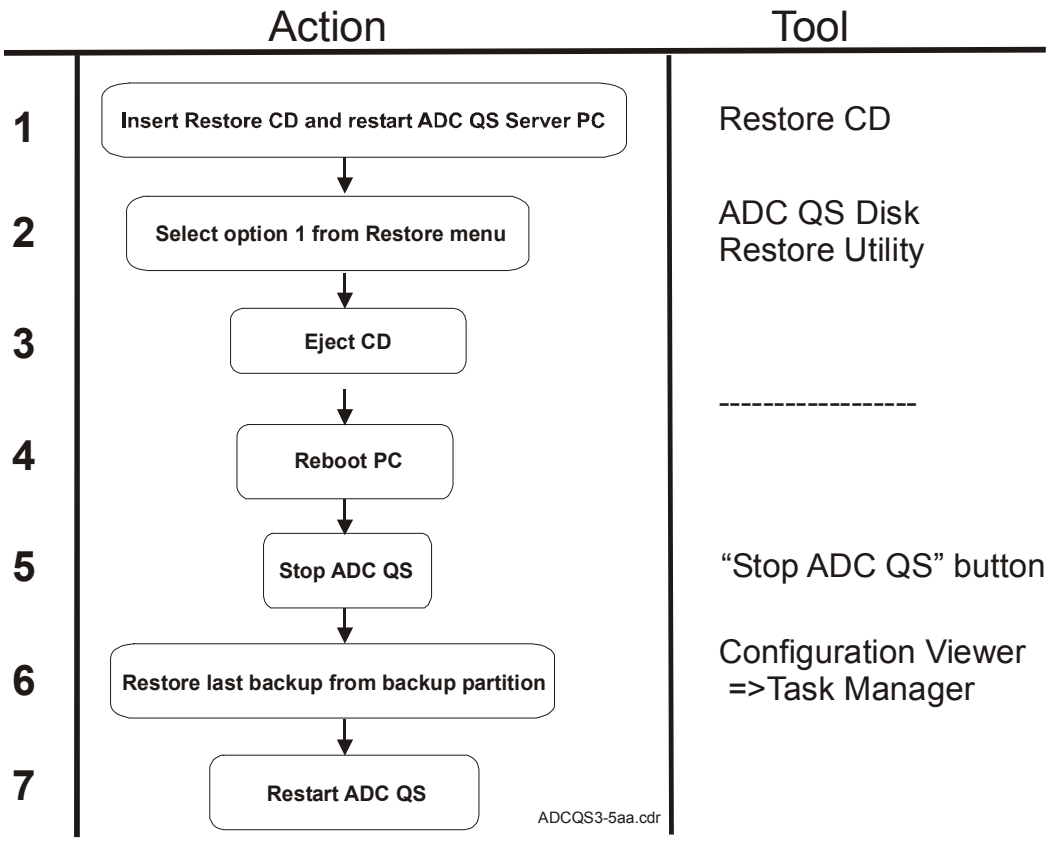

Command Prompt - autoexec
A:\>
A:\>autoexec
A:\>mscdex.exe /d:oemcd001 /l:q
Device driver not found: 'OEMCD001'.
No valid CDROM device drivers selected
AGFA ADC-QS Disk Restore Utility
Press (1) to RESTORE ADC-QS Server Disk1.
Press (2) to RESTORE ADC-QS Server Disk2.
or (Q) to quit (no action).
Select: 1
Restore FIRST hard drive ? (All existing data will be overwritten)(Y/N)
Confirm:

Start screen of Restore CD

1.3.1 Restore Server System Disk

Select this option, if you need to restore the first hard disk drive (contains NT Operating System and AGFA ADC-QS software). If it is still possible, create first a backup before starting the Restore procedure.

If you have a recent backup on the second hard disk drive, you can run the 'Restore' task to retrieve configuration settings and patient data from the second hard disk drive.

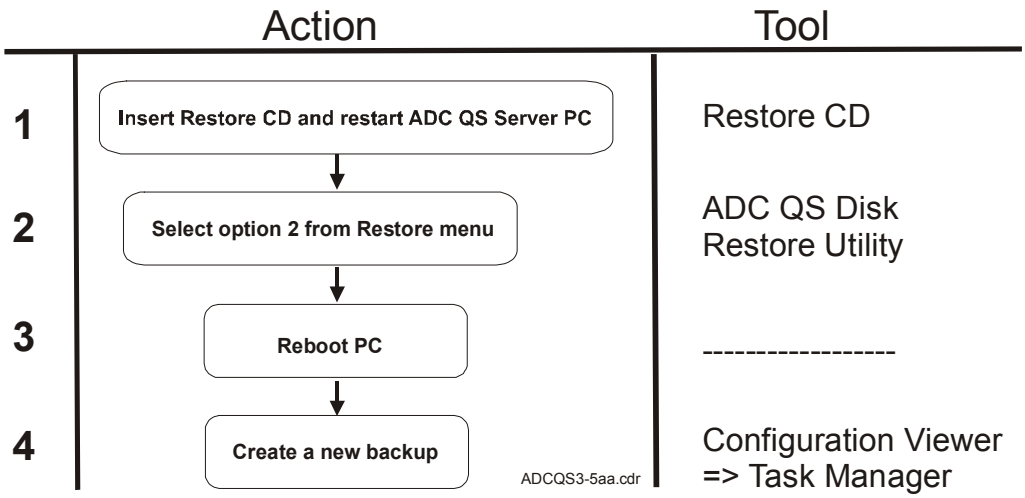


If no backup was possible before using the Restore CD it can happen that:

- Patient data stays in database but no related images exist.
- Images, stored after creating the Restore CD, remain but the related database entries are lost.

1.3.2 Restore Server Data Disk

When restoring the server data disk, all the stored images and backup files are lost, because partition of the hard disk deletes all data.



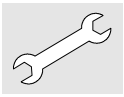
1.4 Restrictions of Restore Procedure

1.4.1 General Restrictions

- Restore CD can only be used for the PC it was created on.
- Restore CD can only be used if hardware has not changed since creation of the ADC QS Server Restore CD.
- Restore CD gives the status of the system when CD was created. Upgrade to the latest application software may be necessary.

1.4.2 Restrictions for Server

- Restoring system disk on server only gives the configuration/patient info status of the latest backup.
- Restoring the image disk results in unrecoverable image data loss.



Chapter 3.7

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In section 3.2 an overview of the Configuration Viewer tool is given. Additionally, you can refer to the online-help implemented on the software.

1 Devices

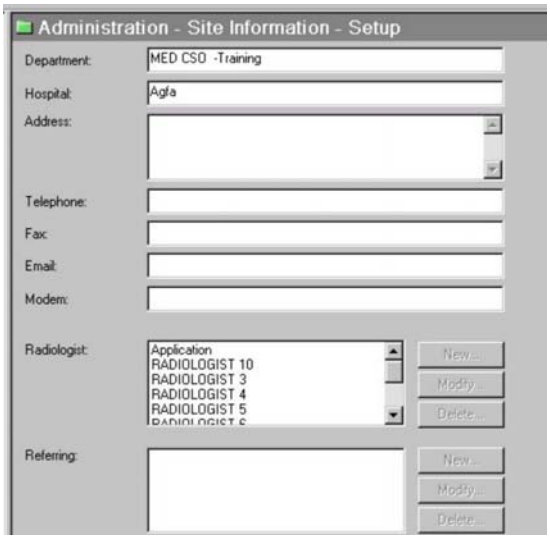
- **Storage**
  These settings are not to be changed. They are set during installation.

- **Printers**
  NT printers need to be installed, see usual NT procedure to install printers.
  Medical printers need to be added with a procedure, see 1.1 of this chapter.

- **Destinations**
  Destinations are fully configured by cpf-file.

- **Gateways**
  Gateways are partly configured by cpf-file, partly by `<Network Settings>` on NT-level.

- **Site Info**
  CR Settings are fully configured by cpf-file.
  Systems Settings are shown in the window `<Regional Settings>` on NT level.
  Administration shows the `<Site Info>` screen to enter the site data.



- **Users**
  This function is not implemented yet.

1.1 Medical Printers

For having all the film formats available it is necessary that the new film format coding is used. When the old film format coding (the named 700-numbers) is used, not all possible film formats are available.

For having the new film format coding available, the following Software prerequisites are necessary:

PRID 1.2.09
CCM 1.1.06

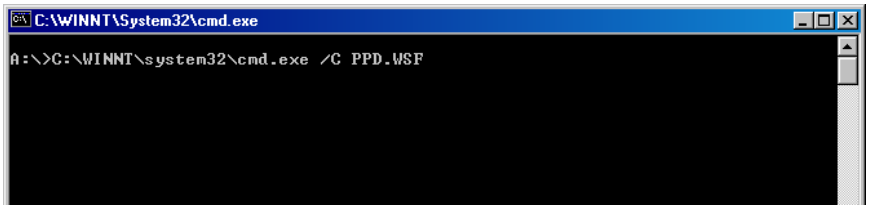
1.1.1 Installing ppd-files from floppy on ADC QS Server Station

(1) Insert the floppy disk “ADC QS PRINTER_PPD”

(2) Select

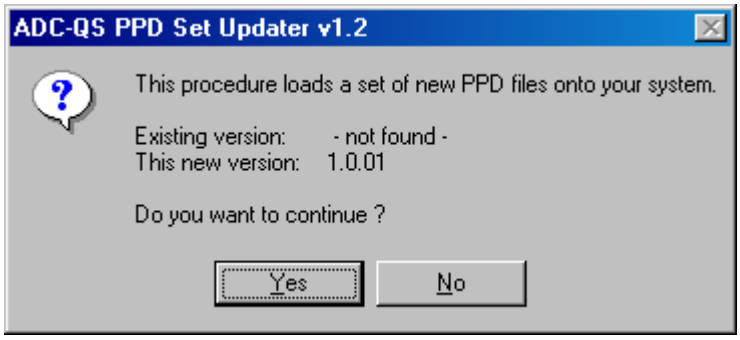
`<Start>`
`<Run>`
Type: `a:\setup.bat`

DOS windows opens:



No action required.

(3) The ADC QS PPD Set Updater window appears :


ADC-QS PPD Set Updater v1.2
This procedure loads a set of new PPD files onto your system.
Existing version: - not found -
This new version: 1.0.01
Do you want to continue ?
Yes
No

Note :
If there was a version installed before, you will see the version number displayed at “Existing version:”.

ADC QS

Server

Click `<Yes>` to continue.

(4) System is checking for administrator rights.
No action required.

(5) If ADC QS application is running, it will be closed.
No action required.

(6) New PPD files will be copied from the floppy to the system
No action required.

(7) At the end, the application is starting up again if it was running before. When it was not running when starting the installation of the ppd-files, it is not starting up.

(8) ADC QS PPD Set Updater window appears :

Click <OK> to confirm

Note :

The amount of files transferred depends on how many ppd files are copied over from the floppy to the system. This will grow when more printers (more ppd files) are added to the floppy.

1.1.2 Adding Medical Printers to ADC QS Server Station

Note that the new printer has to be added to the cpf-file via CCM tool before you start the following procedure.

Stop the application and start Configuration Viewer only.

ADC QS
Server

(9) Select
`<Start>`
`<Agfa>`
`<Adcqs>`
`<Configuration>`

(10) The `Configuration Viewer` login appears.
Press `<OK>` to login
(no user name or password required)
The `Configuration Viewer` starts up.

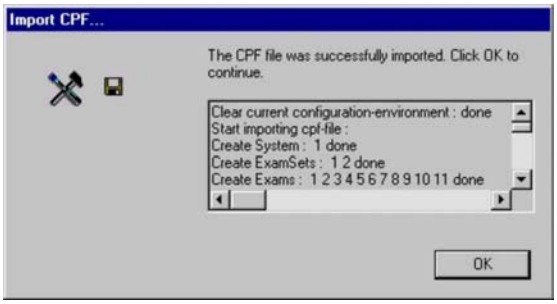
(11) Insert the floppy disk with the cpf-file *adc.cpf*

(12) Select
`<File>`
`<Import CPF ...>`

(13) The `Import` window appears.
Select floppy drive
Select cpf-file to be imported.

(14) Click `<Open>` button to start import.

(15) `Import CPF ...` window appears.


Import CPF...
The CPF file was successfully imported. Click OK to continue.
Clear current configuration-environment : done
Start importing cpf-file :
Create System : 1 done
Create ExamSets : 1 2 done
Create Exams : 1 2 3 4 5 6 7 8 9 10 11 done
OK

CPF-file is imported. This may take some time depending on the size of the CPF-file.

(16) When finished the `Printer Configurator` window appears.

The printers displayed in the list are known to the application now, but still have to be configured in the NT environment.

Write down the name of the printer (case sensitive) to be installed as it will be needed further on in this procedure (step 25).

(17) Select a printer from the list and click `<Install>`

(You can only install one printer at a time).

(18) Welcome screen appears.

Click `<Next>`

(19) Click `<ACCEPT>` for license agreement.

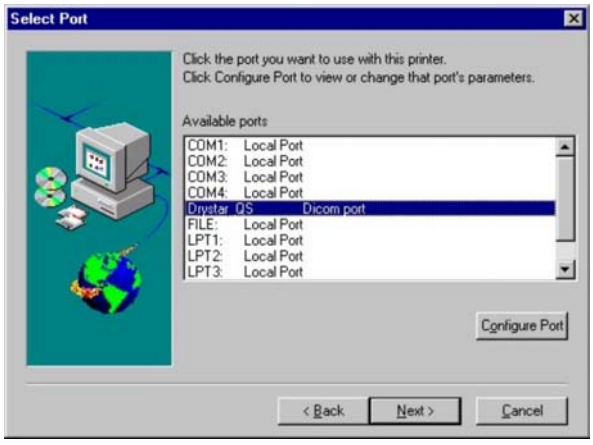
(20) `Printer Connection Type` screen appears.

Select “It is directly connected to your computer (Local Printer)” and click `<Next>`

ADC QS

Server

(21) `Local Port Selection` window appears.



Select the DICOM port for your printer and click `<Next>`

(The proper port contains the destination name of the printer like in CPF-file and the term Dicom Port.)

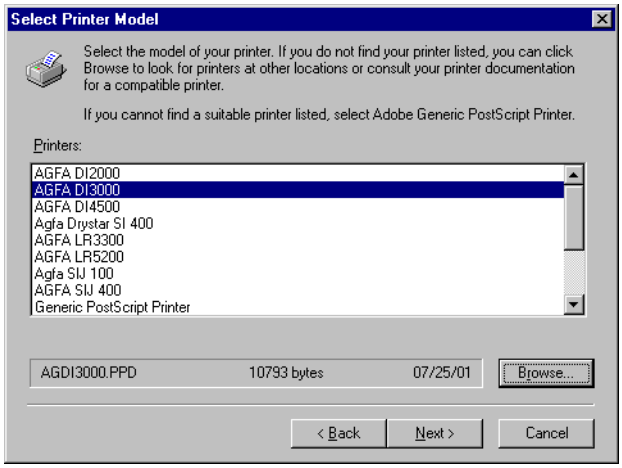
(22) `Select Printer Model` window appears

Click `<Browse>`

Select directory `E:\Agfa\CompasServer\Printer Setup\ppd` and select your printer type from the list.

Click `<OK>`

(23) `Select Printer Model` window appears again

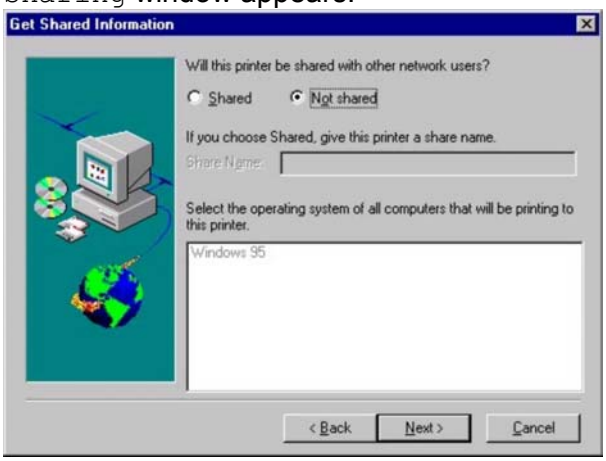

Select Printer Model
Select the model of your printer. If you do not find your printer listed, you can click Browse to look for printers at other locations or consult your printer documentation for a compatible printer.
If you cannot find a suitable printer listed, select Adobe Generic PostScript Printer.
Printers:
AGFA DI2000
AGFA DI3000
AGFA DI4500
Agfa Drystar SI 400
AGFA LR3300
AGFA LR5200
Agfa SIJ 100
AGFA SIJ 400
Generic PostScript Printer
AGDI3000.PPD
10793 bytes
07/25/01
Browse...
< Back
Next >
Cancel

Click `<Next>`

ADC QS

Server

(24) `Sharing` window appears.


Get Shared Information
Will this printer be shared with other network users?
Shared
Not shared
If you choose Shared, give this printer a share name.
Share Name:
Select the operating system of all computers that will be printing to this printer.
Windows 95
< Back
Next >
Cancel

The selection depends on whether you want to print from the ADC QS Server only, or if a client station should also be able to use the printer.

If the printer should also be available from the client, select `<Shared>` and enter a name for the shared printer.

Click `<Next>`

(25) `Printer Information` window appears.

Delete the printer name in the field and enter the destination name of the printer noted down before.

If it is the second printer, you can select it as default printer.
Select `<No>` for “Would you like to print the testpage”
and click `<Next>`

(26) `Setup Information` window appears.

Check if everything is OK and click `<Install>`

(27) If the “Read only file detected” dialog appears, click `<Yes>`

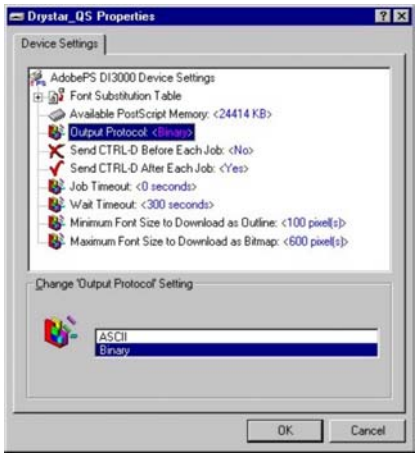
(28) `Printer Configuration` window appears

Select `<Yes>` on “Would you like to configure your printer now?”
and click `<Next>`

ADC QS

Server

(29) The `Device Settings` window appears.



Select `<Output Protocol>` and set it to `<Binary>`

Click `<OK>`

(30) `Setup complete` window appears.

Uncheck “Yes I want to read the ReadMe file” and click `<Finish>`

(31) The `ConfigView` window asks you to print a testpage. Click `<No>`

(32) Repeat steps (16) to (31) for all printers in the list.

(33) Click `<Cancel>` when finished and `<OK>` on `ConfigView` info window

(34) Click `<OK>` on “Importing CPF-file window”

(35) Reset ADC QS application

Troubleshooting:

If the **printer configuration failed** for whatever reason go on that way:

- Check that printer queue is really empty
- Remove the printer from the cpf-file
- Stop ADC QS
- Start only `ConfigViewer`
- Import cpf-file
- Remove the printer from NT-Printer settings, if it is still there
- Add the printer again to the cpf-file and import the cpf-file again
- Start printer configuration again and follow exactly the instructions!

1.1.3 Adding Medical Printers to ADC QS Client Station

Printers which should be available for printing on the client station must have the status "shared" for network access on the server station.

The server station must be up and running.

(2) Stop the ADC QS application

(2) Click on NT Start button

(3) Select
`Settings`
`Printers`

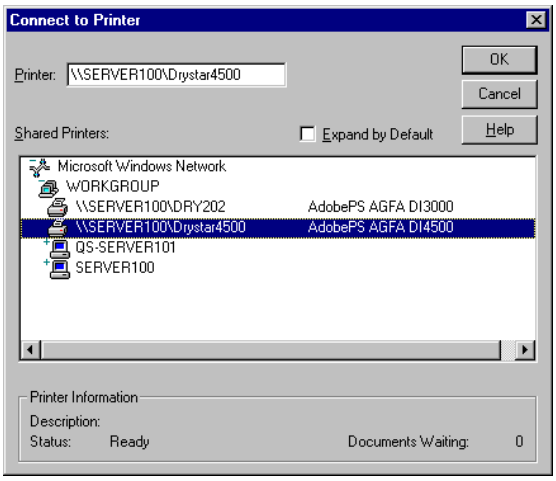
(4) Double click `Add Printer`

(5) Add Printer wizard starts

Select `Network printer server`

and click `<Next>`

(6) `Connect to Printer` window appears



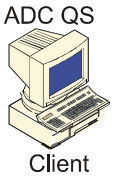
Browse (double click) and locate the printer

Click `<OK>`

(7) Select `<No>` on question:
"Do you want your windows based programs to use this printer as the default printer?" (appears only from 2nd printer on)

Click `<Next>`

(8) Click `<Finish>`



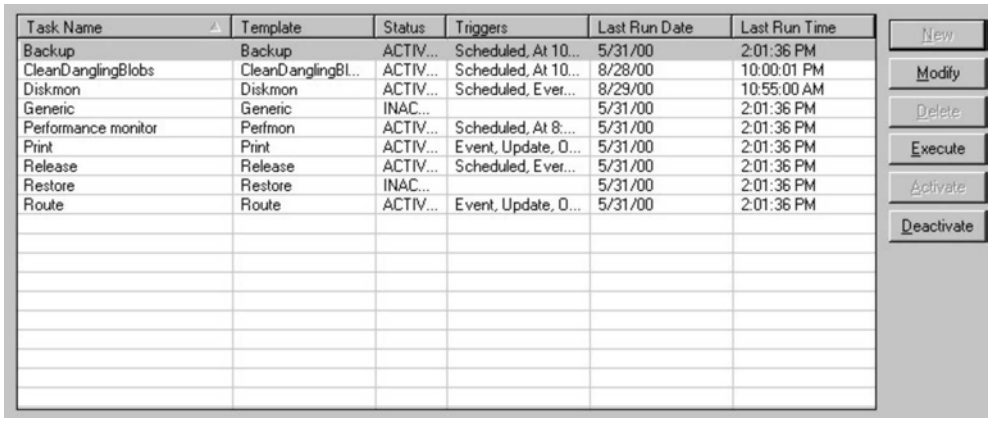
2 Monitoring

2.1 License Management

Option where licenses can be switched on/off and monitored.

2.2 Task Management

Usually the default settings for the tasks can be used.


Task Name
Template
Status
Triggers
Last Run Date
Last Run Time
Backup Backup ACTIV... Scheduled, At 10... 5/31/00 2:01:36 PM
CleanDanglingBlobs CleanDanglingBl... ACTIV... Scheduled, At 10... 8/28/00 10:00:01 PM
Diskmon Diskmon ACTIV... Scheduled, Ever... 8/29/00 10:55:00 AM
Generic Generic INAC... 5/31/00 2:01:36 PM
Performance monitor Perfmon ACTIV... Scheduled, At 8:... 5/31/00 2:01:36 PM
Print Print ACTIV... Event, Update, O... 5/31/00 2:01:36 PM
Release Release ACTIV... Scheduled, Ever... 5/31/00 2:01:36 PM
Restore Restore INAC... 5/31/00 2:01:36 PM
Route Route ACTIV... Event, Update, O... 5/31/00 2:01:36 PM
New
Modify
Delete
Execute
Activate
Deactivate
Task Management Screen

- **Backup**
  Backup normally runs once a day. The time when it runs can be changed and should be adapted to the customer's needs. It can also be executed manually. This should be done before doing major changes like software upgrades.
- **CleanDanglingsBlobs**
  This task deletes image pixel files for which no data base entry exists.
- **DiskMon**
  Takes care of deleting old images.
- **Generic**
  Not used.
- **PerformanceMonitor**
  Starts up the NT Performance Monitor in the NT background to log system statistics (e.g. CPU-load)
- **Print**
  Takes care of auto-printed jobs.
- **Release**
  Takes care of released studies.
- **Restore**
  Restores a backup. Normally only necessary in case the data base entries are lost (e.g. crash of the system HDD).

- **Route**
  Takes care that jobs sent to DICOM destinations are automatically forwarded to their pre-defined destinations.

3 Service

Nothing to be configured here.

4 Set Image Routing for ADC QC-Viewer

This procedure describes the setting of criteria for images displayed on the Client Station.

(1) Make sure ADC QS Server Station is up and running

(2) Start client application by clicking on the button “Start ADC-QS”

(3) Click on NT Start Button and select

```
<Agfa>
  <Adcqs>
    <Configuration>
```

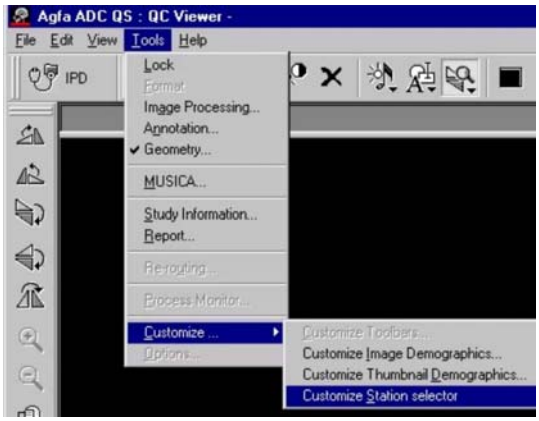
Configuration Viewer login appears

(4) Click `<OK>` to login

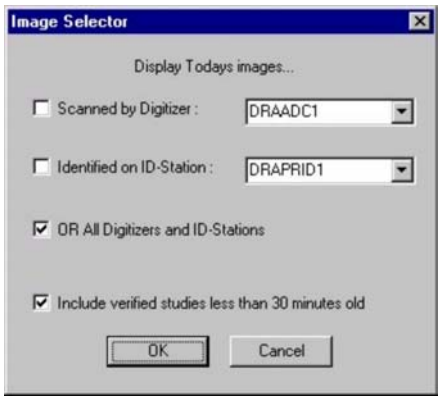
No user name or password required

(5) Select

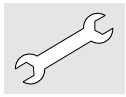
```
<Tools>
  <Customize>
    <Customize Station selector>
```



(6) `Image Selector` window opens:



(7) Check that the two boxes at the bottom are selected and click `<OK>`
The image criteria are set.



Chapter 3.8

List of Contents

1 Release Info for ADC QS 2.0.08 1

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1.2 What is new in ADC QS 2.0.08? 1

1.3 Detailed functional Overview of Software Options ADC QS 2.0.08 1

1 Release Info for ADC QS 2.0.08

1.1 Prerequisites

For having all the film formats available it is necessary that the new film format coding is used. When the old film format coding (the named 700-numbers) is used, not all possible film formats are available.

For having the new film format coding available, the following Software prerequisites are necessary:

PRID 1.2.09
CCM 1.1.06

1.2 What is new in ADC QS 2.0.08?

- The reliability of the system increased considerably
- Up to three clients can be connected to one server
- Local languages available (English, French, Dutch, Spanish, German, Portuguese, Swedish)
- New supported printers (see appendix)
- Quick print stability is increased
- The collimation functionality improved
- Disk monitor behavior changed – rejected studies will not be reclaimed as first anymore, but are handled as if they were verified studies that were routed and printed
- Problem with storing of view position in database is resolved (AP/PA)
- Problem with mirroring of images on IMPAX is resolved

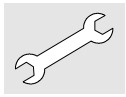
1.3 Detailed functional Overview of Software Options ADC QS 2.0.08

Subject	Functions
ADC Online-Processing SW	
(Configuration)	**Configuration-Viewer**
	DICOM destination configuration
	Server configuration (gateway, task manager)
	Printer configuration
	Backup / Restore
	Logging
	Import/Export CPF-File
	License the SW
(DICOM Gateway)	**Accept images from multiple SOLO/COMPACT (DICOM Storage SCP)**
(Task manager)	**Managing online processing (=auto print, online MUSICA processing, disc monitoring)**

Subject	Functions
(Server)	**Meta data server**
	DICOM attributes
	Online image Processing server (MUSICA, collimation)
(Storage)	**Storage server**
	Local disk
(Basic-QC)	**Basic QC -Viewer**
	Sequential overview
	Image processing (basic: user can select processing parameters from a different exam type)
	System monitor (functions reachable/adjustable)
	Preview
	Retrieve images (history list)
	Window/Level + "Undo W/L"
	Free annotation text
	Mirror, rotate (flip/rotate)
	Magnifying glass
	Hold/release (study oriented)
	Shutters
	Print (basic):
	DICOM print (check IE-release for supported printers)
	Quick print (Re-Print=using the same layout and destination as online)
	Print of modified images (W/L, rotate, etc.)
ADC IPD-Viewer	
(released for Server only)	**Selector mode**
	Filter pane
	List view pane (=result of a query = worklist)
	Thumbnail pane (=pictorial view)
	Navigation pane (=favorite query)
	Viewer mode
	Navigation palette (select: study, patient, image)
	Format palette
	"One" single large image view
	"2, 4 or 9" image view
	Image processing palette
	Window/level
	Undo window/level
	Show histogram
	Basic Image Processing settings (select processing parameters from a different exam type)
	Advanced Image Processing settings (interactive image proc., changing MUSICA parameters, selection of sensitometric curves)

Subject	Functions
	Invert
	Burn
	Collimation
	Automatic Collimation
	Collimation on/off
	Show collimation frame
	Shutters
	Transform palette
	Flip/rotate
	Zoom in/out
	Magnifying glass
	Roaming
	Annotation
	Distance measurement
	Angle measurement
	Line calibration
	Line
	Arrow
	Rectangle
	Circle
	Polygon
	Grid
	Rectangular ROI
	Free annotation text
	Predefined annotation text
	Image management
	Configurable Demographics
	Display study overview
	Dialog boxes
	Study information
	Save
	Delete
	Print
	DICOM print (check IE-release for supported printers)
	Quick print (Re-Print = using the same layout and destination as online)
	Print of modified images (W/L, rotate, etc.)
	Support old "ADC7xx" layouts
	Support new non MG3 layouts
	GUI (support drag and drop of images into sheets)
	Changing layout and printing destination, sheet sizes , etc.
	Handle multiple sheets (because of study oriented working)

Subject	Functions
	Common and image specific text box
	Quick Print
	Viewing one image of one study
ADC DICOM-Store Connection	
	DICOM Storage of raw/processed image
	on-line transmission via network
ADC Multi Format Import/Export	
	off-line transmission via CD-writer
	Import/Export XML Format between QS systems
ADC Autorouting SW	
(Task manager)	Auto routing
(Task manager)	Auto archive (to PACS)
ADC Annotation SW	(Mark-up palette) (option on QC viewer only)
	Distance measurement
	Angle measurement
	Line calibration
	Circular calibration
	Line
	Arrow
	Rectangle
	Circle
	Polygon
	Grid
	Density Profile
	Rectangular ROI
	Free annotation text
	Predefined annotation text
ADC Black Border SW	
	Black border
ADC Smart-Print SW	
	Layout generation editor
	Drag images between sheets
	Shuttered, zoomed and roamed images
	Starting from empty sheet
	Paper print (postscript)
ADC Pediatric SW	
ADC Uro/Tomo SW	
ADC Dental SW	



Chapter 3.9

- will follow-

Identification Diagrams

4

Chapter 4

contains:

- An alphanumeric reference list
- Reference diagrams for the identification and location of assemblies in the machine
- Block diagrams

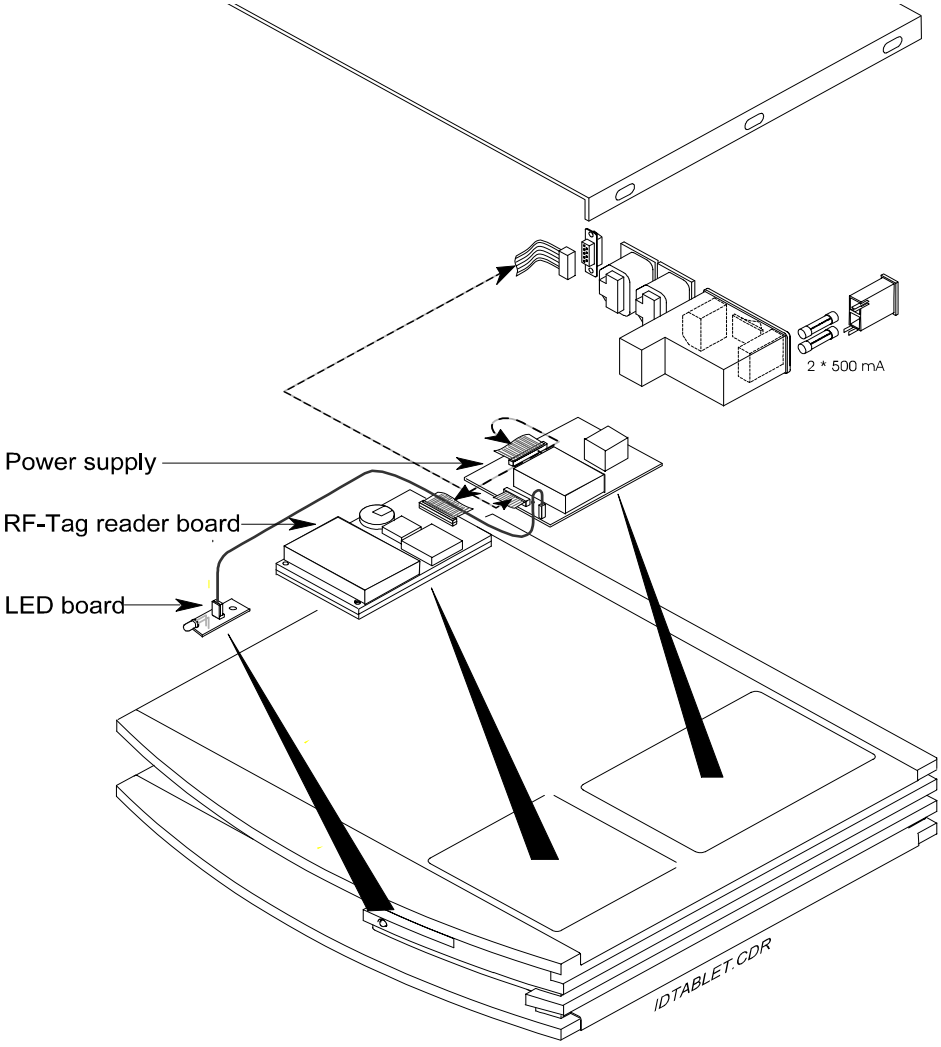
Chapter 4

List of Contents

1 ID Tablet.....1

1 ID Tablet

Designation	Function
Power supply	Power Supply for the ID-tablet
RF TAG reader board	Reads and writes the ID-data
LED board	Power on



MEDICAL IMAGING
CSO Customer Support Operations

Technical Documentation

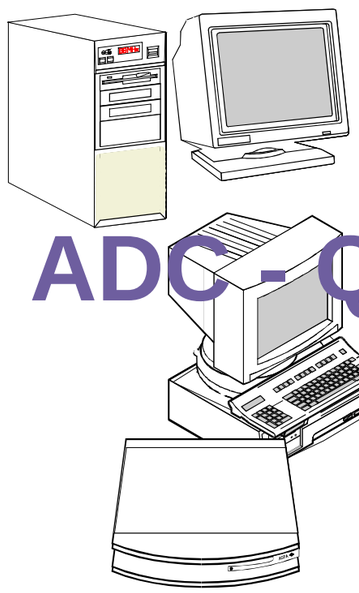
Order No.: DD+DIS177.00M

1T8PEP1
1 Piece T8PEP MA1

ADC - QUALITY SYSTEM
Type 4406/421

Ersatzteilliste
Spare Parts List
Liste des Pièces de Rechange

1. Ausgabe
1st Edition
1ère édition



4406_0421_TIBL.cdr

Die Ersatzteilliste ist gesondert lieferbar: Bestellnummer DD+DIS177.00M
The spare parts list is available seperatly: Order number DD+DIS177.00M
La liste des piéces detachées est á votre disposition séparément: No. de Ref. DD+DIS177.00M

Bestellen von Ersatzteilen und Ersatzteilsortimenten: **Tel.: xx49 - (0)89 - 6207 - 3760** **Fax.: xx49 - (0)89 - 6207 - 7388**

To order spare parts and spare part assortments:

Commande de pièces détachées et assortiments des pièces détachées:

Bestellen von Dokumentation: **Tel.: xx49 - (0)89 - 6207 - 3553**
To order documentation: **Fax.: xx49 - (0)89 - 6207 - 7271**
Commande de documentation:

printed in Germany

AGFA

Inhaltsverzeichnis
Contents
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MONITOR
MONITEUR

ANSCHLUSSLEITUNG **SEITE / PAGE 02**
CONECTING CABLE
CABLE DE RACCORDEMENT

STECKVERBINDUNGEN **SEITE / PAGE 03 – 04**
CONNECTORS
CONNECTEURS

SCHELLEN **SEITE / PAGE 05 - 06**
CLAMPS
COLLIERS

Hinweise
Notes
Remarques

Hinweise

Anschlüsse und Reparaturen elektrischer Art dürfen nur von einer Elektrofachkraft durchgeführt werden!
Anschlüsse und Reparaturen mechanischer Art dürfen nur von einer Fachkraft durchgeführt werden!

D = Normteil. Die Bestellnummer ist der separaten Normteileliste "DD+DIS011.93M" zu entnehmen.

☐ = Baugruppe.

* = Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

Änderungen von Daten und Eigenschaften, die dem technischen Fortschritt dienen, vorbehalten.

Notes

Electrical connections and repairs must only be made by authorised electricians.
Mechanical connections and repairs must only be made by authorised technicians

D = Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M".

☐ = Assembly

* = Spare part not available from stock. Expect extended delivery times.

We reserve the right to change data and characteristics in the light of technical progress.

Remarques

Seul un spécialiste est autorisé à réaliser les branchements et réparations élecriques.
Seule une personne qualifiée est autorisée à réaliser les raccords et réparations mécaniques.

D = Pièce normalisée. Vous trouvez leur référence dans la liste, á part, des pieces normalisees "DD+DIS011.93M"

☐ = Modul

* = Piece detachee n´est pas disponible depart stock. Délai prolongé en cas de commande.

Sous réserve de modifications de données et de caractéristiques pouvant servir au progrès technique.

Spare Parts List

5

Chapter 5

contains exploded drawings for the identification of the spare parts in the machine with order numbers

Ersatzteilsortimente

1. Sortiment - Typen

Ersatzteilsortimente sind eine Auswahl funktionswichtiger Teile aus der Ersatzteiliste, empfohlen vom Hersteller.
Die Sortimente unterliegen technisch und inhaltlich dem Änderungsdienst.

- **R** ‘repair‘ → Teilebedarf zur Reparatur
- **I** ‘installation‘ → Gerätespezifische Teile zur Installation des Gerätes, die nicht im Lieferumfang enthalten sind
- **M** ‘maintenance‘ → Teilebedarf für eine Wartung, inklusive gerätespezifischer Hilfsstoffe und Schmiermittel
- **L** ‘local stock‘ → strategisch wichtige oder sperrige Teile, die im zentralen Lager bereitliegen sollen

Das R-Sortiment soll der Techniker im Auto mitführen = Carstock.
Die Sortimente I und M können dem Carstock hinzugefügt werden.
Alternativ können sie als eigenständige (Koffer-) Läger bereitgehalten werden, auf die bei einer Installation bzw. Wartung zugegriffen wird (planbare Einsätze).
Technologieabhängig kann es Zusatzsortimente für ein Gerät geben, wie z.B. 50, 60 Hz-Teile.

2. Mengen

Alle Sortimente stellen eine Startmenge dar, jeweils kalkuliert für 1-10 Geräte.
Wir empfehlen die Mengen individuell anzupassen, in Abhängigkeit von folgenden Parametern:

- Geräteanzahl
- Größe des betreuten Servicegebiets
- Servicestruktur (zentral/dezentral)
- Bevorratungszeit und Bevorratungsart
- Anzahl der Wartungskontrakte (trifft nur für M-Sortiment zu)

3. Bestellverfahren

- Die verfügbaren Sortimente finden Sie unter Punkt 5.

- Bestellungen von Agfa Vertretungen: wir empfehlen die Sortimente nicht mit der jeweiligen Sortimentsnummer zu bestellen, sondern bedarfsabhängig pro Artikel.

- Für jedes der einzelnen Sortimente ist eine Teileliste bei der zentralen Logistik in München auf Anfrage erhältlich. Bestelladresse siehe Punkt 4.

4. Bestelladresse

LOG-T, München
Tegernseer Landstr.161
81536 München
Tel.: +49 - 89 - 6207 3760
Fax.: +49 - 89 - 6207 7388

Bestellung der Teile für firmenzugehörige Besteller läuft über die Logistik des Landes.

5. Sortimentsliste

CM+044060421734	ADC-QS Basic SW (Online-Processing Sw)	Version	1

Spare Parts Kits

1. Types of spare parts kits

The Spare parts kits are a selection of functionally important parts from the spare parts list, recommended by the manufacturer.
Technical characteristics and contents of the spare parts kits are subject to the notification service for technical modifications.

- **R** 'repair' → parts required for repair
- **I** 'installation' → machine specific parts for the machine installation which are not included in the machine shipment
- **M** 'maintenance' → parts required for maintenance, including machine specific materials and lubricants
- **L** 'local stock' → strategically important or bulky parts which should be kept at hand in the central warehouse

The R kit is the kit which the technician should keep in the car = car stock.

The kits I and M can be added to the car stock.
As an alternative they can also be kept as separate (suitcases) stocks, ready for access in case of an installation or maintenance job (calls which can be planned ahead).

Depending on the technology there may be additional kits for a machine as e.g. 50, 60 Hz parts.
For order numbers for additional kits (if relevant) refer to item 5.

2. Quantities

All these kits represent the initially required quantities calculated for 1-10 machines.
We recommend to adapt the quantities individually, always depending on the

- Number of machines
- Size of the service area to be covered
- Service structure (centralized/decentralized)
- Stock time and stock type
- Number of maintenance contracts (this only applies to the M kit)

3. Ordering procedure

- The available kits are listed in item 5.

- Orders by Agfa agencies: We recommend to order the parts not by the kit number but to order the individual parts according to demand.

- For each individual spare parts kit there is a parts listing available upon request at the central logistics department in Munich. Ordering address → see item 4

4. Ordering address

LOG-T, Munich
Tegernseer Landstr.161
81536 Munich
Tel.: +49 - 89 - 6207 3760
Fax.: +49 - 89 - 6207 7388

For company connected ordering the parts have to be oredered via the national logistics department.

5. Listing of spare parts kits

CM+044060421734	ADC-QS Basic SW (Online-Processing Sw)	Version	1

Kits de pièces détachées

1. Types de kits

Les kits comprennent des pièces recommandées par le fabricant dont le fonctionnement est important et qui ont été sélectionnées dans la liste des pièces détachées.
Les caractéristiques techniques et le contenu des kits de pièces détachées sont gérés par le service technique.

- **R** 'réparation' → pièces requises pour la réparation
- **I** 'installation' → pièces spécifiques à la machine et nécessaires pour son installation qui ne sont pas contenues dans la livraison
- **M** 'maintenance' → pièces requises pour la maintenance, y compris les moyens auxiliaires et les lubrifiants spécifiques à la machine
- **L** 'local stock' → pièces stratégiques ou encombrantes qui devraient être stockées dans le magasin central

Le kit R est le kit que le technicien devrait avoir dans sa voiture = car stock.

Les kits I et M peuvent être ajoutés au stock de voiture.
Autre possibilité: ces kits peuvent être conservés à part, dans des valises, auxquelles il est possible d'accéder en cas d'installation ou de révision (pour interventions prévues d'avance).

Suivant la technologie il peut y avoir des kits spéciaux pour un appareil par ex. pièces pour 50, 60 Hz.
Vous trouvez sous le point 5 les références de ces kits (si significatives).

2. Quantités

Tous ces kits représentent les quantités requises initialement, calculées pour 1 à 10 machines. Nous vous recommandons d'adapter les quantités individuellement d'après les paramètres suivants:

- Nombre de machines
- Superficie de la zone d'intervention du technicien
- Structure du service technique (centralisé/décentralisé)
- Temps et type d'approvisionnement des stocks
- Nombre de contrats d'entretien (n'est valable que pour le kit M)

3. Méthode pour passer commande

- Les kits disponibles sont indiqués au point 5.

1. pièces détachées par le numéro du kit mais individuellement, selon les besoins.

2. Une liste de pièces détachées de chaque kit est mise à disposition, sur demande, à partir du centre de logistique de Munich. Adresse: → voir le point 4

4. Adresse pour la commande

LOG-T, Munich
Tegernseer Landstr.161
81536 Munich
Tel.: +49 - 89 - 6207 3760
Fax.: +49 - 89 - 6207 7388

Les commandes des pièces pour les membres de la société AGFA doivent être effectuée par la logistique nationale.

5. Liste des kits de pièces détachées

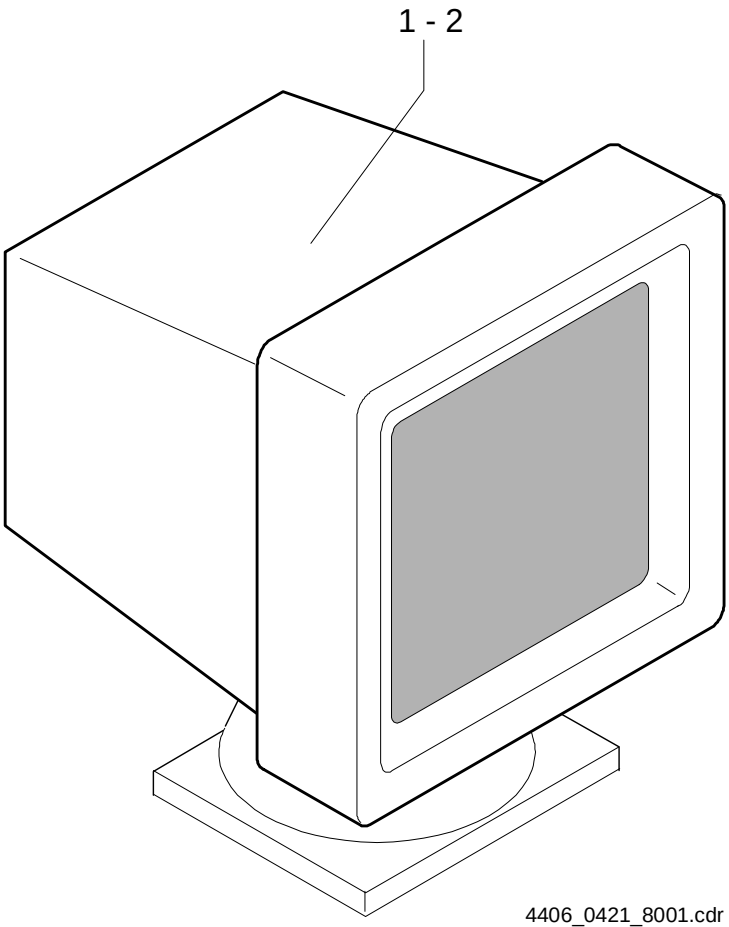
CM+044060421734	ADC-QS Basic SW (Online-Processing Sw)	Version	1

Typenverzeichnis / Type List / List de Type

ADC-QS Basic SW (Online-Processing SW)	4406 / 0421	EC5S8
ADC QS PC-SERVER	4406 / 0001	ECZWV

Zubehör / Accessories / Accessoire

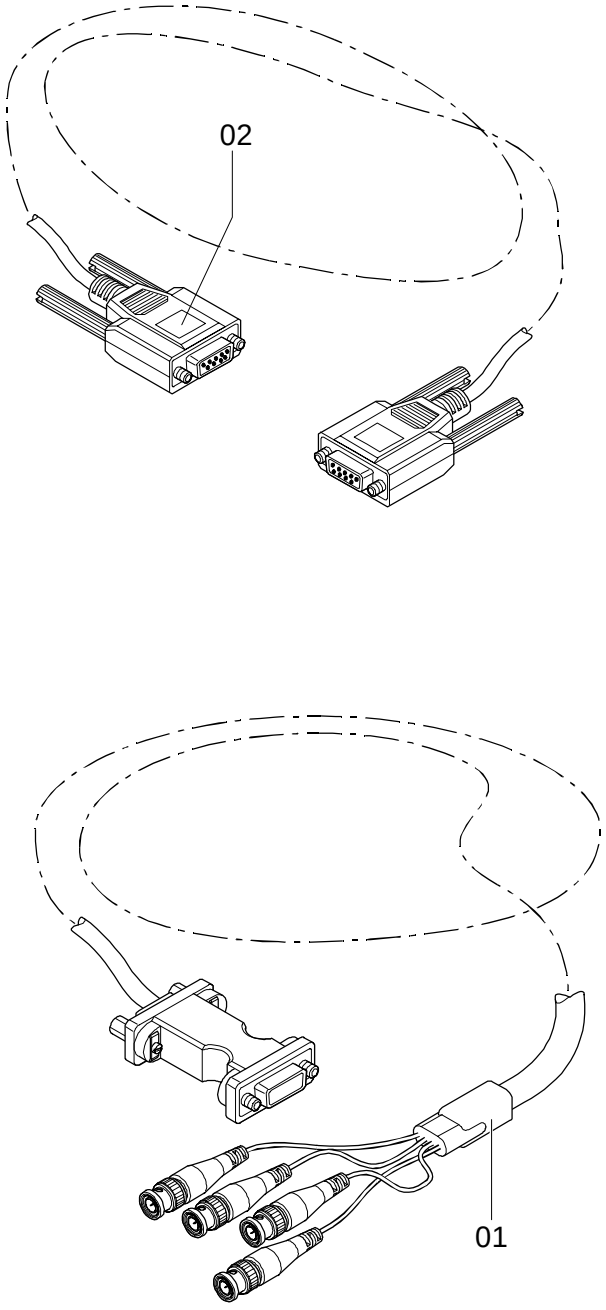
SOFTWARE		
ADC IPD VIEWER	4406/0423	EC5TB
ADC QC-VIEWER	4406/0004	-------
ADC AUTOROUTING	4406/0428	EC5WH
ADC URO/TOMO	4406/0436	EC53U
ADC PEDIATRIC	4406/0435	EC52S
ADC DENTAL	4406/0437	EC54W
ADC SMARTPRINT	4406/0433	EC51Q
ADC ANNOTATION	4406/0431	EC5XK
ADC BLACK BORDER	4406/0432	EC5YM
ADC MULTI-FORMAT IMP/EXP	4406/0011	EDBS3
ADC DICOM-STORE CONNECTION	4406/0426	EC5VF
HARDWARE		
ADC STANDARD PC	4406/0002	ECZXX
ADC VGA-MONITOR	4406/0003	ECZYZ
ADC SB1K MONITOR	4406/0861	3678C
ADC HB1K MONITOR	4406/0871	368BL
ADC UPS	4406/0890	368CN
ADC TEST PHANTOM SET	4406/0930	37KC3
AGFATEK LINK SERVICE HOST	----------	LDQUT



MONITOR
MONITOR
MONITEUR

Pos. Nr. Item no. Pos. no.	Teile.Nr. Part No. Nr. de Ref.	Benennung Description Denomination
1	EB+44060401	MONITOR AGFA STAND. HELLIGKEIT 1K / 21" LANDSCAPE--2182L MONITOR AGFA STAND. BRIGHT. 1K / 21" LANDSCAPE--2182L MONITEUR AGFA STAND. LUMINOSITÉ 1K / 21" LANDSCAPE--2182L
2	EB+44060490	MONITOR AGFA HOHE HELLIGKEIT. 1K / 21" LANDSCAPE--2183L MONITOR AGFA HIGH. BRIGHT. 1K / 21" LANDSCAPE--2183L MONITEUR AGFA GRAND LUMINOSITÉ 1K / 21" LANDSCAPE--2183L
99	CM+7896612390	MAVO DIGITAL LUMINANCE METER (FÜR SCHWARZ/WEISS MONITORE) MAVO DIGITAL LUMINANCE METER (FOR MONITORS BLACK AND WHITE) MAVO DIGITAL LUMINANCE METER (POUR MONITEURS NOIR/BLANC)

☐ =Baugruppe / Assembly / Modul
D=Normteil. Die Bestellnummerist der separaten Normteileliste "DD+DIS011.93M" zu entnehmen.
D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"
D=Pìece normalisée. Vous trouvez leur référence dans la liste, á part, des pieces normalisées "DD+DIS011.93M"
*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.
*=Spare part, not available from stock. Expect extended delivery times.
*=Piece detachee n´est pas disponible depart stock. Délai prolongé en cas de commande.



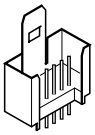
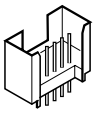
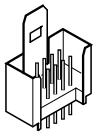
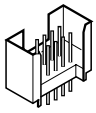
4406_0421_8002.CDR

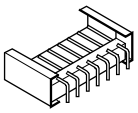
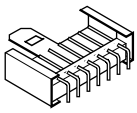
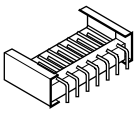
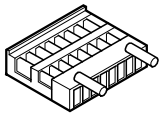
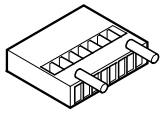
ANSCHLUSSLEITUNG
CONNECTING CABLE
CABLE DE RACCORDEMENT

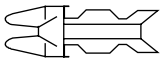
Pos. Nr. Item no. Pos. no.	Teile.Nr. Part No. Nr. de Ref.	Benennung Description Denomination
1	EB+44100390	MON. KABEL VGA - 4XBNC MON. CABLE VGA - 4XBNC MON. CABLE VGA - 4XBNC
2	CM+9999910180	NULL-MODEM KABEL 9 PIN / 9 PIN-FEMALE/FEMALE RS-232 (FÜR MONITOR SERVICE) NULL-MODEM CABLE 9 PIN / 9 PIN-FEMALE/FEMALE RS-232 (FOR MONITOR SERVICE) NULL-MODEM CABLE 9 PIN / 9 PIN-FEMALE/FEMALE RS-232 (POUR MONITOR SERVICE)

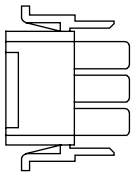
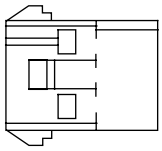
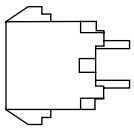
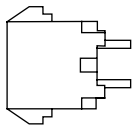
☐ =Baugruppe / Assembly / Modul
D=Normteil. Die Bestellnummerist der separaten Normteileliste "DD+DIS011.93M" zu entnehmen.
D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"
D=Pìece normalisée. Vous trouvez leur référence dans la liste, á part, des pieces normalisées "DD+DIS011.93M"
*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.
*=Spare part, not available from stock. Expect extended delivery times.
*=Piece detachee n´est pas disponible depart stock. Délai prolongé en cas de commande.

ANSCHLUSSLEITUNG
CONNECTING CABLE
CABLE DE RACCORDEMENT

	STIFTLEISTE STEHEND / MALE CONNECTOR VERTICAL / RÉGLETTE À GOUPILLES VERTICALE			
POLZAHL **NO.OF POLES** **NOMBRE DE PÔLES**	EINREIHIG MIT RASTLASCHE ONE-ROW WITH LATCH À UNE RENGÉE, AVEC LANGUETTE DE CRANTAGE 	EINREIHIG OHNE RASTLASCHE ONE-ROW WITHOUT LATCH À UNE RENGÉE, SANS LANGUETTE DE CRANTAGE 	DOPPELREIHIG MIT RASTLASCHE TWO-ROW WITH LATCH À DEUX RANGÉES, AVEC LANGUETTE DE CRANTAGE 	DOPPELREIHIG OHNE RASTLASCHE TWO-ROW WITHOUT LATCH À DEUX RANGÉES, SANS LANGUETTE DE CRANTAGE 
2		CM+7.0471.1738.0	CM+7.0471.1384.0	
3	CM+7.0471.1739.0		CM+7.0471.1385.0	
4		CM+7.0471.1741.0	CM+7.0471.1401.0	
5	CM+7.0471.1724.0		CM+7.0471.1809.0	CM+7.0471.1388.0
6			CM+7.0471.1414.0	
7			CM+7.0471.1391.0	
8			CM+7.0471.1395.0	
9			CM+7.0471.1402.0	
10	CM+7.0471.1314.0		CM+7.0471.1397.0	CM+7.0471.1394.0
11			CM+7.0471.1415.0	
12			CM+7.0471.1403.0	
13				
14				
15			CM+7.0471.1765.0	
16			CM+7.0471.1399.0	
18	CM+7.0471.1725.0			
20			CM+7.0471.1404.0	

	STIFTLEISTE LIEGEND (90° ABGEWINKELT) MALE CONNECTOR HORIZONTAL (90° ANGEL) RÉGLETTE À GOUPILLES HORIZONTAL (EN ANGLE DE 90°)			BUCHSE RECEPTACLE DOUILLE	LEERBUCHSE BLANK RECEPTACLE DOUILLE VIDE
POLZAHL **NO.OF POLES** **NOMBRE DE PÔLES**	EINREIHIG OHNE RASTLASCHE ONE-ROW WITHOUT LATCH À UNE RENGÉE, SANS LANGUETTE DE CRANTAGE 	DOPPELREIHIG MIT RASTLASCHE TWO-ROW WITH LATCH À DEUX RANGÉES, AVEC LANGUETTE DE CRANTAGE 	DOPPELREIHIG OHNE RASTLASCHE TWO-ROW WITHOUT LATCH À DEUX RANGÉES, SANS LANGUETTE DE CRANTAGE 	SCHNEID-KLEMM-VERBINDER CUT-AND-CLAMP CONNECTOR JONCTION AUTO-COUPANTE 	OHNE KODIERSTIFT WITHOUT ENCODING PIN SANS GOUPILLE DE CODAGE 
2		CM+7.0471.1756.0		CM+7.0471.1448.0	CM+7.0471.8836.0
3		CM+7.0471.1732.0	CM+7.0471.1386.0	CM+7.0471.1418.0	CM+7.0471.8839.0
4		CM+7.0471.1807.0	CM+7.0471.1387.0	CM+7.0471.1419.0	CM+7.0471.8829.0
5		CM+7.0471.1338.0		CM+7.0471.1437.0	CM+7.0471.8837.0
6		CM+7.0471.1743.0	CM+7.0471.1389.0	CM+7.0471.1438.0	CM+7.0471.8838.0
7		CM+7.0471.1348.0		CM+7.0471.1439.0	CM+7.0471.8840.0
8	CM+7.0471.1717.0	CM+7.0471.1393.0	CM+7.0471.1392.0	CM+7.0471.1421.0	CM+7.0471.8841.0
9				CM+7.0471.1431.0	CM+7.0471.1405.0
10		CM+7.0471.1339.0	CM+7.0471.1396.0	CM+7.0471.1422.0	CM+7.0471.8842.0
11				CM+7.0471.1813.0	CM+7.0471.1416.0
12		CM+7.0471.1341.0	CM+7.0471.1398.0	CM+7.0471.1441.0	CM+7.0471.1342.0
13	CM+7.0471.1719.0			CM+7.0471.1452.0	CM+7.0471.1721.0
14					CM+7.0471.8843.0
15		CM+7.0471.1764.0	CM+7.0471.1766.0	CM+7.0471.1423.0	CM+7.0471.1768.0
16	CM+7.0471.1714.0	CM+7.0471.1343.0	CM+7.0471.1767.0	CM+7.0471.1424.0	CM+7.0471.1716.0
18					
20					CM+7.0471.8844.0

FEDERKONTAKT (VERGOLDET) SPRING CONTACT (GOLD-PLATED) CONTACT À RESSORT (DORÉ)	 ∅ 0,10 - 0,25	CM+7.0471.1312.0
FEDERKONTAKT (VERGOLDET) SPRING CONTACT (GOLD-PLATED) CONTACT À RESSORT (DORÉ)	 ∅ 0.30 - 0,60	CM+7.0471.1383.0

POLZAHL NO.OF POLES NOMBRE DE PÔLES	STECKERGEHÄUSE PLUG ENCLOSURE BOÎTIER DE FICHES 	AUFNAHMEGEHÄUSE (KUPPLUNG) HOUSING (CLUTCH) BOÎTIER-LOGEMENT (EMBRAYAGE) 	LÖT-SOCKEL KPL. MIT STIFTEN SOLDERING BASE ASSY WITH PINS SOCLE SOUDURE COMPLET AVEC BROCHES 	LÖT-SÖCKEL KPL. MIT BUCHSEN SOLDERING BASE ASSY WITH JACKS SOCLE SOUDURE COMPLET AVEC DOULLIES 
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3POL.	CM+7.0471.1327.0	CM+7.0471.1326.0	CM+7.0471.1751.0	CM+7.0471.1786.0
4POL.	CM+7.0471.1336.0	CM+7.0471.1335.0	CM+7.0471.1752.0	CM+7.0471.1407.0
6POL.	CM+7.0471.1325.0	CM+7.0471.1324.0	CM+7.0471.1753.0	CM+7.0471.1408.0
9POL.	CM+7.0471.1307.0	CM+7.0471.1308.0	CM+7.0471.1712.0	CM+7.0471.1736.0
12POL	CM+7.0471.1703.0	CM+7.0471.1704.0	CM+7.0471.1413.0	CM+7.0471.1713.0
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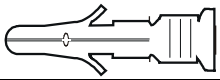
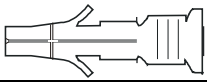
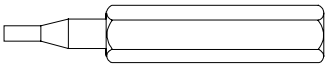
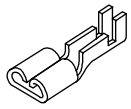
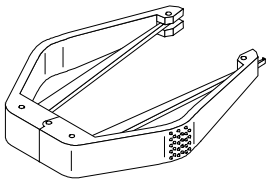
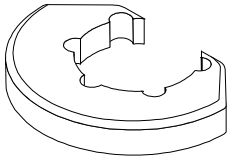
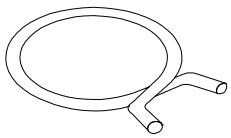
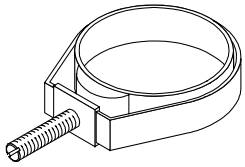
STIFT PIN BROCHE		CM+7.0471.1701.0
BUCHSE JACK DOUILLE		CM+7.0471.1702.0
ENTNAHMEWERKZEUG EXTRACTING TOOL OUTIL D`EXTRACTION		CM+9.9999.0793.0

STECKHÜLSE A (6,3 x 0.8/2,5) 'E' SOCKET A 'F' DOUILLE A		CM+7.0471.3405.0
IC-AUSZIEHWERKZEUGE FÜR PLCC´S EXTRACTOR EXTRACTEUR		CM+9.9999.1005.0
SCHLÜSSEL FÜR VENTIL GORMAN-RUPP-PUMPE KEY FOR VALVES GORMAN-RUPP PUMP		EB+53590280

SCHLAUCHKLEMME
HOSE CLAMP
AGRAFE TUYAU

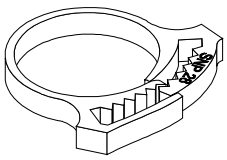


CM+7.0371.9801.0	Ø 23,00 - 24,50 MM
CM+7.0371.9820.0	Ø 18,54 - 19,56 MM
CM+7.0371.9840.0	Ø 12,45 - 12,95 MM
CM+7.0371.9860.0	Ø 13,99 - 14,55 MM
CM+7.0371.9880.0	Ø 15,50 - 16,00 MM
CM+7.0371.9900.0	Ø 20,12 - 21,13 MM
CM+7.0371.9930.0	Ø 24,61 - 26,19 MM
CM+7.0371.9920.0	Ø 26,00 - 27,50 MM
CM+7.0372.0010.0	Ø 58,73 - 61,90 MM
CM+7.0372.0011.0	Ø 11,00 - 11,60 MM

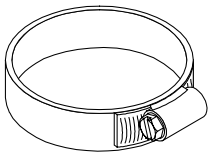


CM+7.0371.9490.1	Ø 12,00 - 14,00 MM
CM+7.0371.9500.1	Ø 12,00 - 17,00 MM
CM+7.0371.9510.1	Ø 16,00 - 21,00 MM
CM+7.0371.9520.1	Ø 20,00 - 25,00 MM
CM+7.0371.9530.1	Ø 24,00 - 29,00 MM
CM+7.0371.9540.1	Ø 28,00 - 33,00 MM
CM+7.0371.9570.1	Ø 40,00 - 45,00 MM
CM+7.0371.9580.1	Ø 44,00 - 49,00 MM

SCHLAUCHSCHELLE
HOSE CLAMP
COLLIER DE GAINE



CM+7.0372.0020.0	Ø 11,50 - 13,90 MM	SNP - 7
CM+7.0372.0021.0	Ø 13,00 - 14,90 MM	SNP - 8
CM+7.0372.0022.0	Ø 21,80 - 25,10 MM	SNP - 19
CM+7.0372.0023.0	Ø 14,50 - 16,50 MM	SNP - 10
CM+7.0371.7009.0	Ø 11,40 - 13,00 MM	SNP - 6
CM+7.0371.7011.0	Ø 19,80 - 22,80 MM	SNP - 18
CM+7.0371.7026.0	Ø 19,00 - 21,50 MM	SNP - 16
CM+7.0371.7027.0	Ø 28,50 - 32,90 MM	SNP - 28
CM+7.0371.7028.0	Ø 25,00 - 28,80 MM	SNP - 24
CM+7.0372.0019.0	Ø 15,70 - 18,00 MM	SNP - 12
CM+7.0372.0030.0	Ø 17,80 - 20,40 MM	SNP - 14
CM+7.0372.0040.0	Ø 23,60 - 27,20 MM	SNP - 22



CM+7.0371.9637.0	Ø 12,00 - 20,00 MM
CM+7.0371.9640.0	Ø 25,00 - 40,00 MM
CM+7.0371.9638.0	Ø 10,00 - 16,00 MM
CM+7.0371.9639.0	Ø 16,00 - 27,00 MM

SCHLAUCH AUS NEOPREN — NEOPRENE TUBE - TUYAU FLEXIBLE EN NÉOPRÈNE

CM+0.0000.64.041	SCHLAUCH 3X1.5MM SW

SCHLAUCH PVC WEICH — PVC TUBE SOFT — TUYAU FLEXIBLE EN PVC BLANCS

CM+0.0000.07.025	SCHLAUCH 19X2,5 TRANS / HOSE TRANS / TUYAU FLEXIBLE TRANS
CM+0.0000.64.131	SCHLAUCH 19X2,5 BLAU / HOSE BLUE / TUYAU FLEXIBLE BLEU
CM+0.0000.64.132	SCHLAUCH 19X2,5 ROT / HOSE RED / TUYAU FLEXIBLE ROUGE

SCHLAUCH PVC GEWEBEVERST. -- PVC TUBE FIBRE REINFORCED -- TUYAU PVC Á FIBRES RENFORCÉES

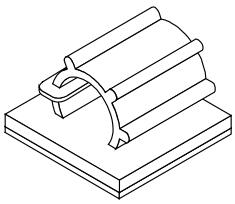
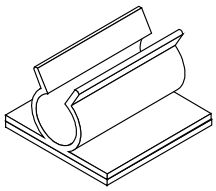
CM+0.0000.07.620	SCHLAUCH 19X4 TRANS GEWEBEVERSTÄRKT / HOSE TRANS FIBRE-REINFORCED / TUYAU FLEXIBLE TRANS Á FIBRES RENFORCÉES
CM+0.0000.64.134	SCHLAUCH 19X4 BLAU GEWEBEVERSTÄRKT / HOSE BLUE FIBRE-REINFORCED / TUYAU FLEXIBLE BLEU Á FIBRES RENFORCÉES
CM+0.0000.64.133	SCHLAUCH 19X4 ROT GEWEBEVERSTÄRKT / HOSE RED FIBRE-REINFORCED / TUYAU FLEXIBLE ROUGE Á FIBRES RENFORCÉES
CM+0.0000.64.082	SCHLAUCH 10X3 ROT GEWEBEVERSTÄRKT / HOSE RED FIBRE-REINFORCED / TUYAU FLEXIBLE ROUGE Á FIBRES RENFORCÉES
CM+0.0000.64.083	SCHLAUCH 10X3 BLAU GEWEBEVERSTÄRKT / HOSE BLUE FIBRE-REINFORCED / TUYAU FLEXIBLE BLEU Á FIBRES RENFORCÉES

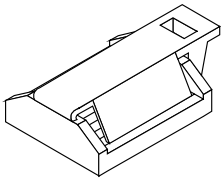
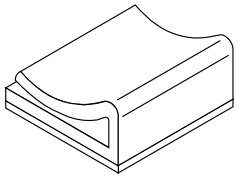
SCHLAUCH KANN UNTER DER NUMMER CM+0.0000.XX.XXX ALS METERWARE BESTELLT WERDEN.
TUBE IS AVAILABLE BY THE METRE UNDER NUMBER CM+0.0000.XX.XXX.
TUYAU FLEXIBLE PEUVENT ÊTRE COMMANDÉS AU MÈTRE SOUS LE N° CM+0.0000.XX.XXX
1 METER = 1 STÜCK 1 METRE = 1 PIECE 1 MÈTRE = 1 PIÈCE

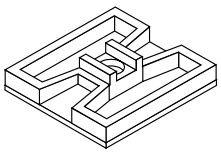
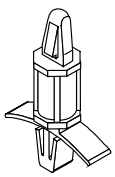
KABELBINDER / CABLE TIE / ATACHE CABLE

CM+7.0371.8700.0	KABELBINDER (102 X 2,4 MM)
CM+7.0371.8880.0	KABELBINDER (254 X 4,8 MM)
CM+7.0371.9000.0	KABELBINDER (140 X 2,4 MM)
CM+7.0371.9200.0	KABELBINDER (98 X 2,5 MM)
CM+7.0479.1122.0	KABELBINDER (132 X 4,8MM)

FLACHKABELHALTER UND SCHELLEN — RIBBON CABLE HOLDER AND CLAMPS — SUPPORT DE CÂBLE PLAT ET COLLIERS

SCHELLE / CLAMP / COLLIER  CM+7.0371.8019.0 - < 5 MM CM+7.0371.8011.0 - < 8MM CM+7.0371.8012.0 - < 20MM	KLEBESCHELLE / ADHESIVE CLAMP / COLLIER ADHÉSIF  CM+7.0371.9230.0

FLACHKABELHALTER / RIBBON CABLE HOLDER / SUPPORT DE CÂBLE PLAT  CM+7.0477.0801.0 - 30 MM CM+7.0370.0060.0 - 57 MM CM+7.0479.0001.0 - 88 MM	HAFTSCHELLE / SUPPORTING CLAMP / COLLIER DE FIXATION  CM+7.0479.0010.0

BEFESTIGUNGSSOCKEL / MOUNTING BASE / SOCLE DE MONTAGE  CM+7.0370.0080.0	ABSTANDSHALTER F PLATINEN / SPACER / ECARTEUR POUR CARTE ENFISCHABLE  CM+7.0479.1016.0 CM+7.0479.1272.0 CM+7.0479.1305.0

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AGFA

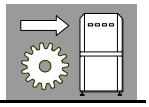
Options (Accessories)

6

Chapter 6

describes the installation of accessories (assembly types).

Repair, maintenance and spare parts of accessories are implemented in the machine documentation or available as separate documentation.



Chapter 6

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2.	Installation and Start-up of additional Hard Disks	DD+DIS124.01E	06/2001
3.	Integration of Touch Screen in ADC Quality System	DD+DIS024.02E	02/2002

Section 6

1
Installation and Start-up of Powerware 5115 UPS

DD+DIS105.01E

Order-No.: DD+DIS105.01E

1 Piece UMF8P MA1

ADC Quality System

Type 4406 / 421

Section 6

Installation and Start-up of the Powerware 5115 UPS

(Uninterruptible Power Supply)

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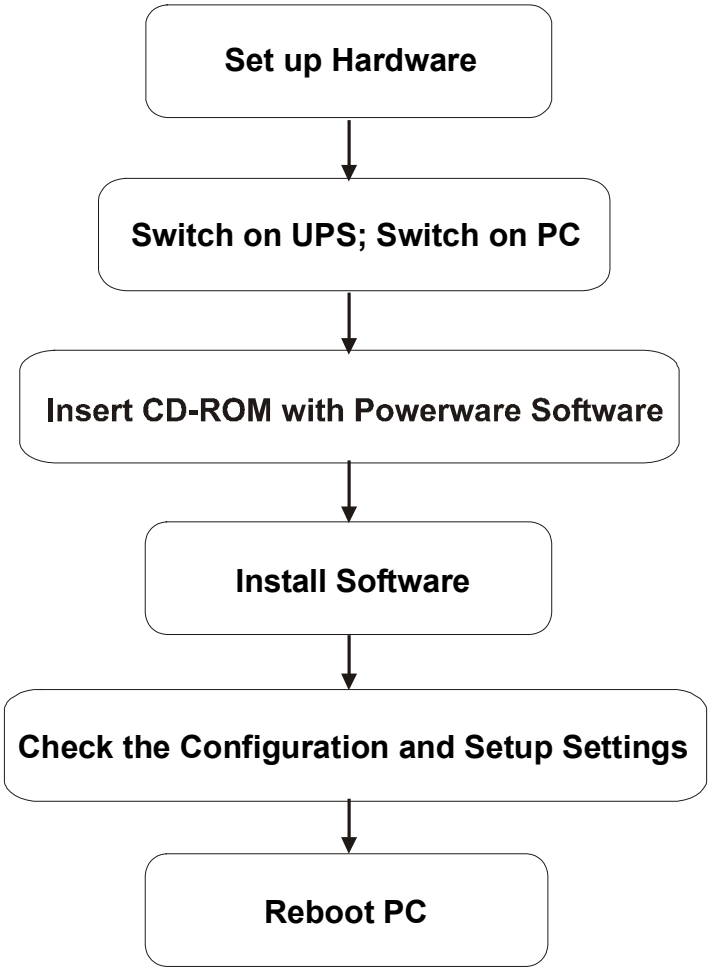
printed in Germany 04 / 2001

1 Overview of Installation Sequence

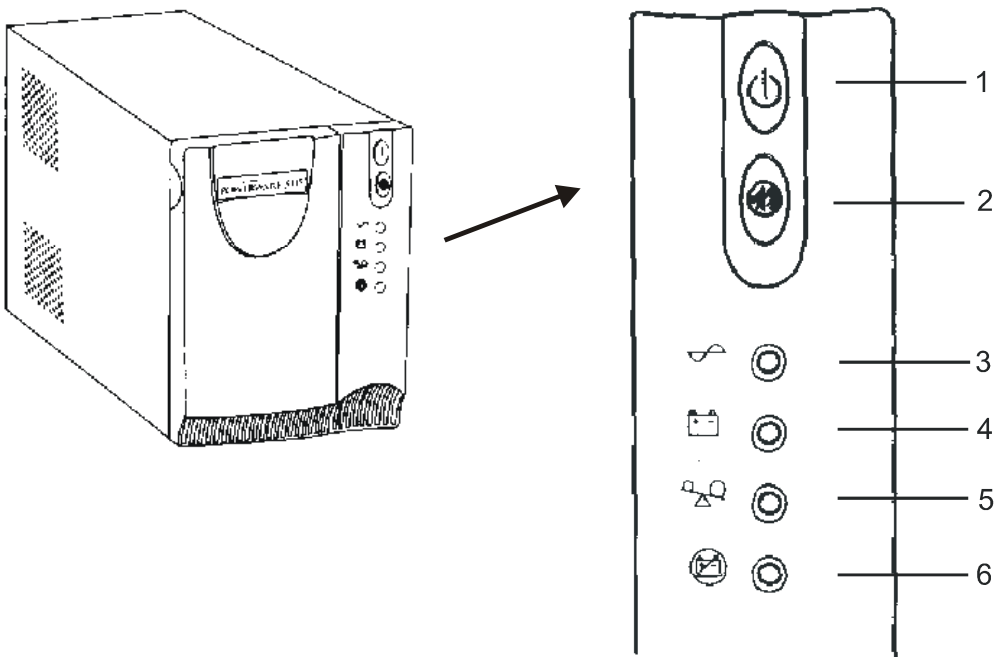

Set up Hardware
Switch on UPS; Switch on PC
Insert CD-ROM with Powerware Software
Install Software
Check the Configuration and Setup Settings
Reboot PC

2 Scope of Delivery

- UPS 750 VA (110 V or 230 V)
- 2 Power cables
- 1 Serial cable
- 1 CD with Powerware software
- 1 Installation guide

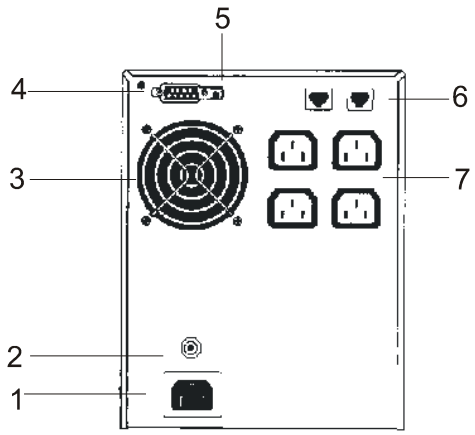
3 Display and Connectors of Powerware 5115 UPS

Front:



1 Main switch
2 Test- / Alarm reset
3 Operating indicator
4 Indicator battery operated
5 Overload indicator
6 Maintenance indicator, battery

Rear:
(Type PW 5115 750 VA)



1 Plug for non-heating apparatus (10 A / IEC 320 input)
2 Overcurrent protection (Input fuse)
3 Ventilator
4 Communication interface
5 DIP - switch
6 Network transient protection
7 Four sockets for non-heating apparatus (10 A / IEC 320)

All the other Types of PW 5115 are described in the user manual, which is part of the delivery of the UPS.

4 Start-up of the Powerware 5115 UPS

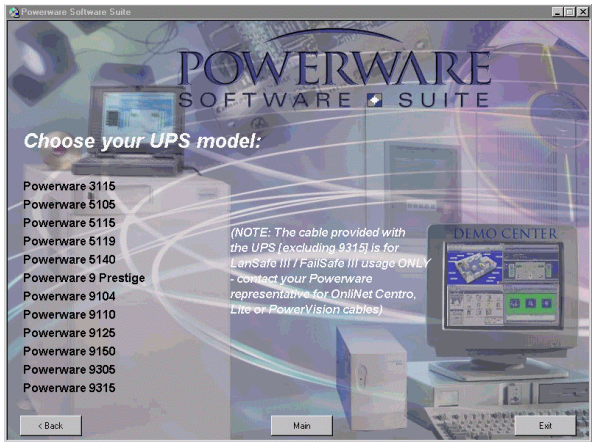
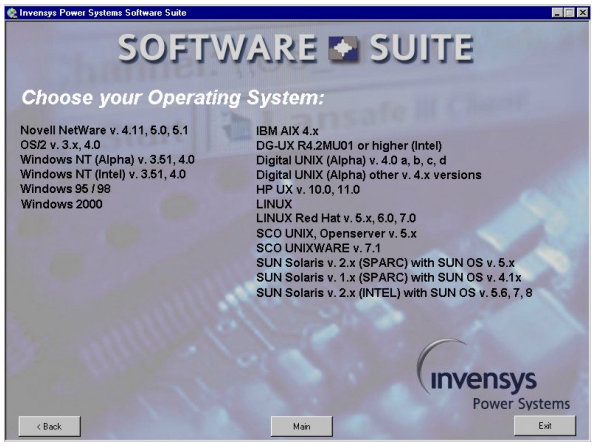
4.1 Installation of Hardware

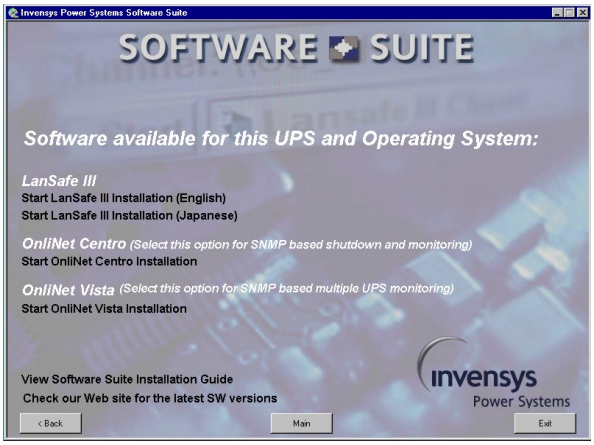
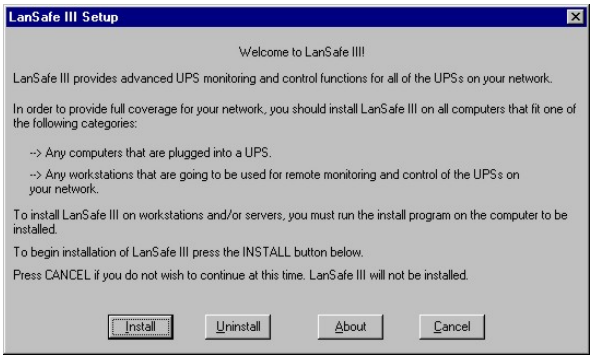
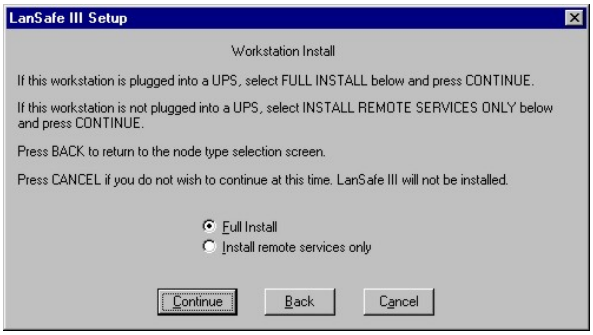
Check before the installation if battery of the UPS is loaded!
(Battery test, see user manual)

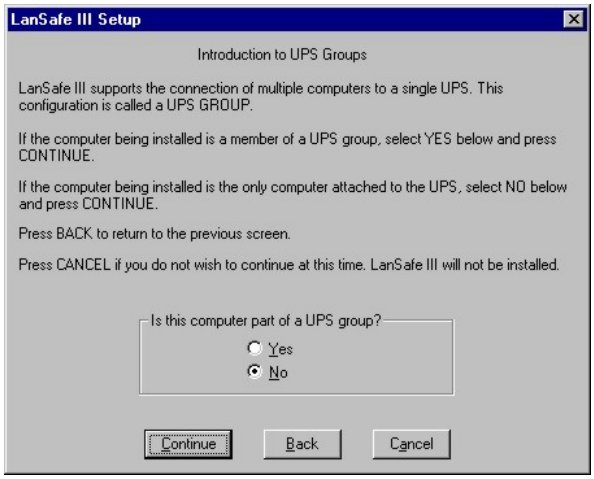
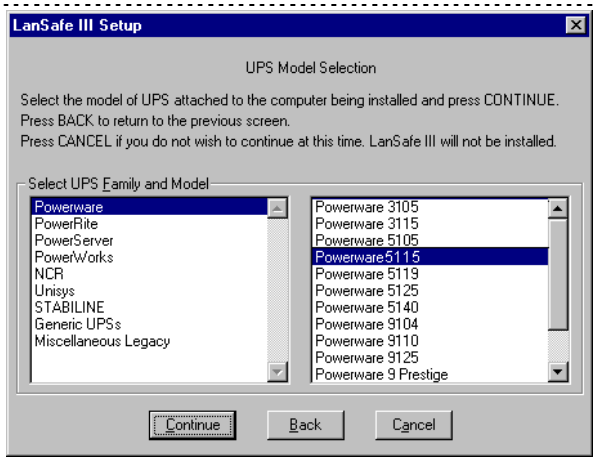
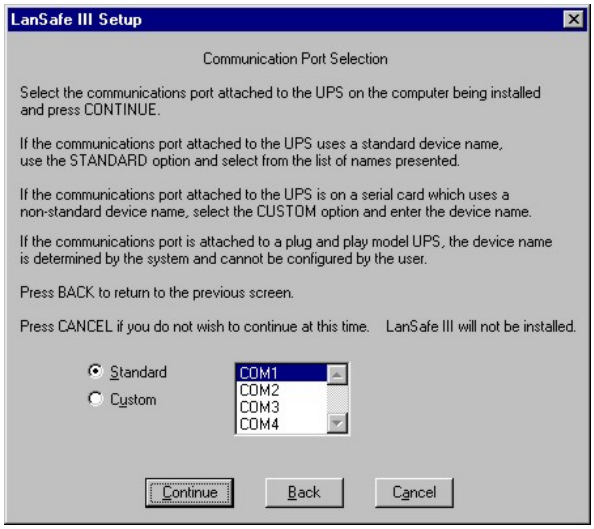
No.	Procedure Steps
1.	Switch off the PC
2.	Connect the UPS to the PC via the serial cable on COM1 or COM2
3.	Connect the mains of the PC, monitor and other devices to the mains outlet of the UPS (4 max.) If you connect a PC to the UPS you have to connect in any case also the associated monitor to the UPS, to avoid different grounding levels.
4.	Switch on the PC and the UPS

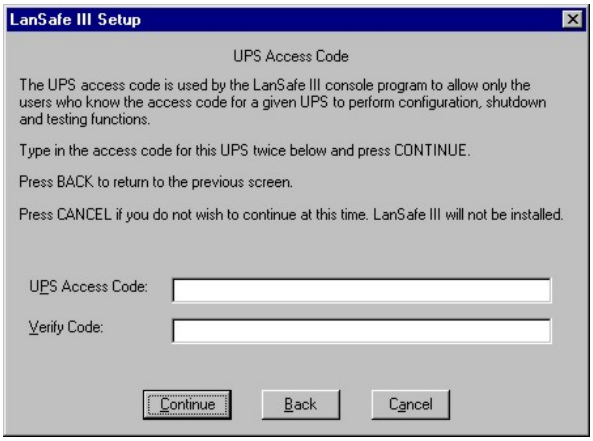
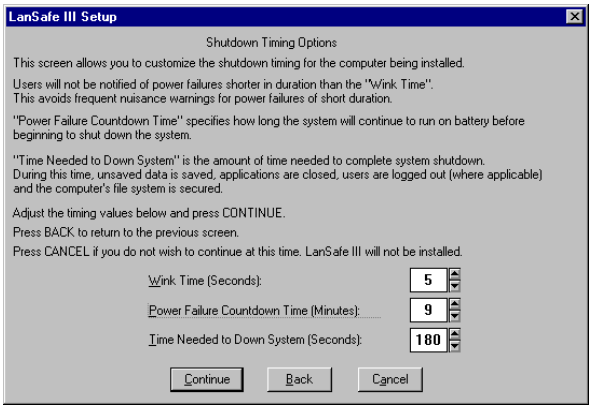
4.2 Installation of Powerware Software

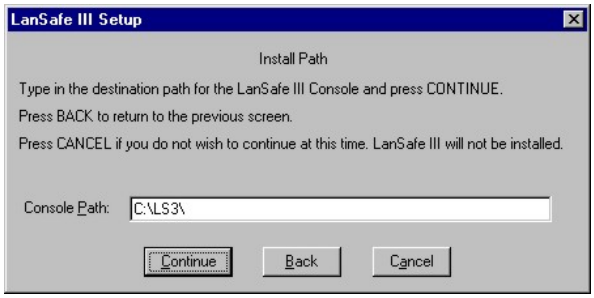
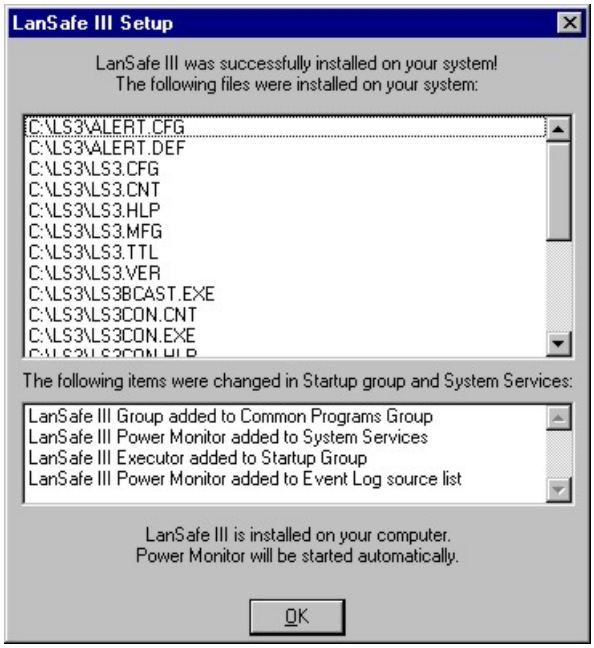
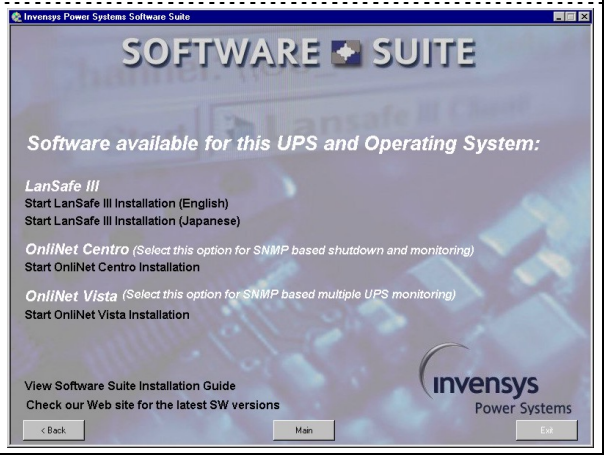
The following instruction will guide you through the installation procedure step by step. Wait until Windows Desktop appears.

No.	Procedure Steps	Display / Comment
1.	Insert CD-ROM	The **<Powerware Software Suite>** main window appears
2.	Click **<Software Installation Wizard>**	
3.	Click **<Powerware 5115>**	
4.	Click **<Windows NT (Intel) v.3.51, 4.0>**	

No.	Procedure Steps	Display / Comment
5.	Select type of connection, for example **<RS-232 Communication Cable>**	
6.	Select software for UPS and operating system, for example **<Start LanSafe III Installation (English)>**	
7.	Click **<Install>**	
8.	Select an install option, and then click **<Continue>**	

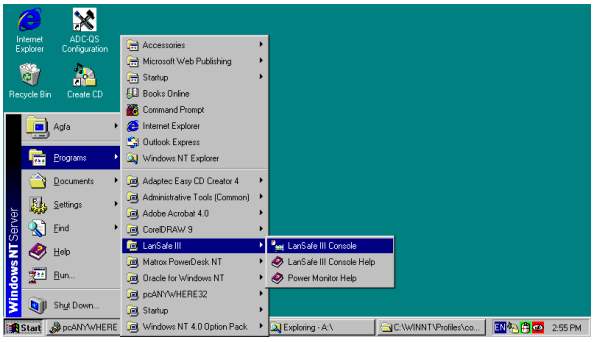
No.	Procedure Steps	Display / Comment
9.	Select UPS group <Yes> or single configuration <No> and then click <Continue>	
10.	Select family and model of UPS <Powerware> and <Powerware 5115>	
11.	Select the used communication port or stay at <Standard COM1> and then click <Continue>	

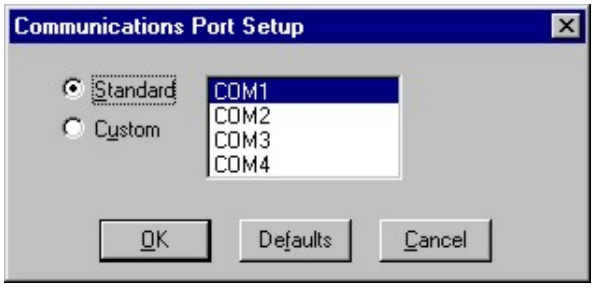
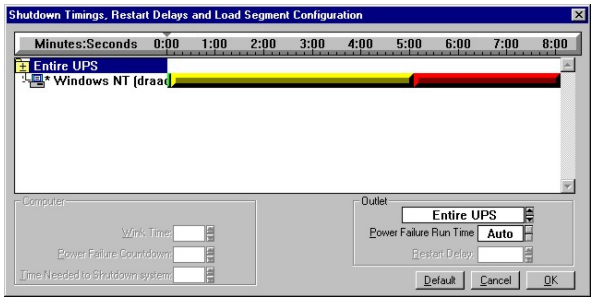
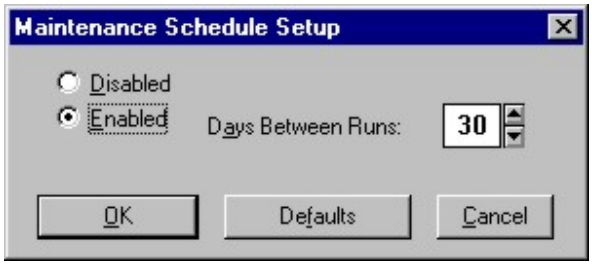
No.	Procedure Steps	Display / Comment
12.	Type in a self created UPS access code, verify it by typing in again and then click **<Continue>**	
13.	Check shutdown timing options • Wink time: Time before a warning message will be displayed. Can be increased during maintenance. (default: 5 sec) • Power Failure Countdown Time: Time until the shut down procedure gets started. (default: 5 sec, re-commended: 9 sec) • Time Needed to Down System: Time provided to down the system. (default: 180 sec)	
14.	Select an option, **<Yes>** is recommended, and then click **<Continue>**	

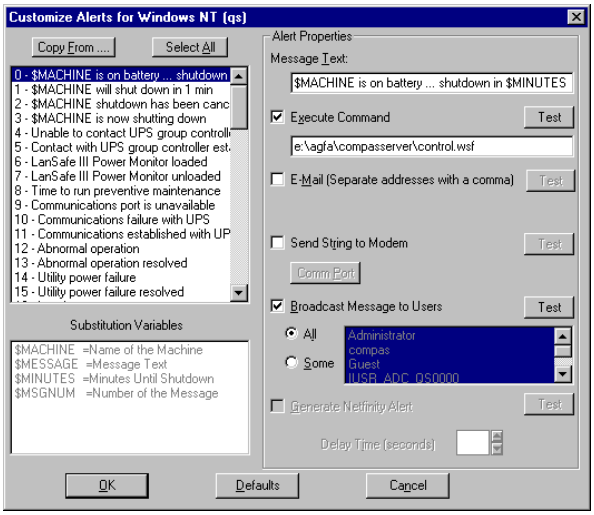
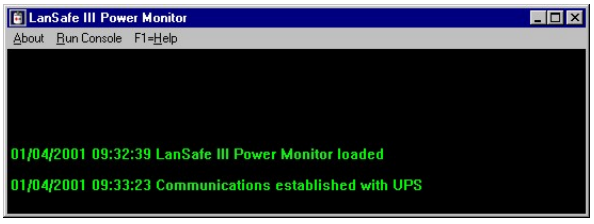
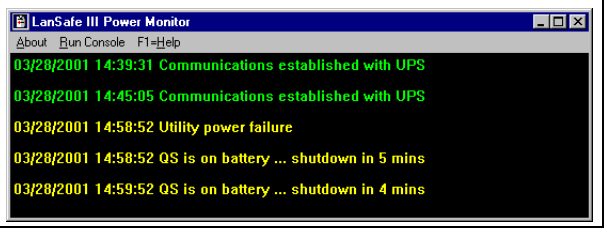
No.	Procedure Steps	Display / Comment
15.	Type in a destination path for LanSafe III Console if you do not want to keep default setting and then click **<Continue>**	
16.	To finish installation and to start Power Monitor automatically, click **<OK>**	
17.	Click **<Exit>**	

4.3 Configuration of Software

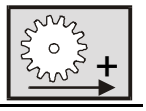
After the UPS software installation has been successfully finished you have to check the configuration settings of the UPS.

No.	Procedure Steps	Display / Comment
1.	Start <LanSafe III console> by selecting the corresponding command from the <Start> menu	
2.	Wait until all parameters are calculated	The node information is displayed
3.	Check load and run time	 The sum of the countdown and shutdown time that you have set during software installation may not exceed the battery run time. The load percentage value gives you an idea of the UPS load. In general, this load will be about 25 % of UPS capacity. See load table at chapter 5.1. Notice, that the rate between load and runtime is not linear.
4.	On the <Setup> menu, click <Communication Port..>	The <Communication Port Setup> dialog box appears

No.	Procedure Steps	Display / Comment
5.	Check communication port setup and change if necessary. Then click **<OK>**.	
6.	On the **<Setup>** menu, click **<Shutdown Timing>**	The **<Shutdown Timings,…>** dialog box appears
7.	Check shutdown timings, restart delay, load segment configuration, and change if necessary. To change a PC UPS configuration, click the PC on the UPS tree, e.g. Windows NT (draadcqs2), change parameters, and then click **<OK>**.	 The UPS tree displays all connected PCs. The outlet parameters can not be changed.
8.	On the **<Setup>** menu, click **<Maintenance>**	The **<Maintenance Schedule Setup>** dialog box appears
9.	Check maintenance schedule setup and change if necessary. Click **<Enabled>** to make the **<Days Between Runs>** box available.	 If you set for example 30 days between runs, a reminder is displayed after 30 days by the Power Monitor.
10.	On the **<Setup>** menu, click **<Customize Alerts>**	The **<Customize Alerts…>** dialog box appears

No.	Procedure Steps	Display / Comment
11.	To customize alerts for the PC click in the list at the alert of your choice and set its properties, e.g. message text or execute command, and then click <OK>. Example: • Select **"0 - $MACHINE is on battery..."** • Select a message text. It will be shown in case of battery operation. • Type in a corresponding command in the **<Execute command>** text box like **<e:\agfa\compasserver\control.wsf>**	
12.	To check the UPS communication click the battery icon in the taskbar.	
13.	The power monitor appears and informs about established communications and power failures.	 

For further questions look at the user manual, which is part of the delivery of the UPS.



5 Additional Information

5.1 Load Table

Load (%)	Battery Run Time (min)
30	28
50	17
58	13
65	12
70	4

5.2 Measured Values for Power Consumption

Dell 420	
Maximum	500 mA
Idle	450 mA

Optiplex GX110	
Maximum	300 mA
Idle	200 mA

Monitor (19”)	
Maximum	650 mA
Power save	50 mA

Monitor Siemens HB	
Maximum	530 mA
Power save	25 mA

5.3 Powerware Service Contact

Powerware UPS service telephone number: +800 – 7533 7533

Section 6

2
Installation and Start-up of Additional Hard Disks

DD+DIS124.01E

MEDICAL IMAGING
CSO Customer Support Operations

Technical Documentation

Order-No.: DD+DIS124.01E

1 Piece UNVSU MA1

ADC Quality System

Type 4406 / 421

Section 6

Installation and Start-up of Additional Hard Disk(s) (Ultra 160 Hard Disk, 68 pin connector)

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1 General 1

2 Scope of Delivery 1

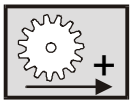
3 Jumper Settings of Additional Hard Disks 1

4 Overview of Installation Sequence 2

5 Installation and Start-up of Additional Hard Disk(s) (unformatted) 3

printed in Germany **06 / 2001**

AGFA



1 General

The purpose of this option is to extend the image file storage capacity of the ADC QS Server Station. This is achieved by adding one or two additional hard disks to the system. A utility script is run to reconfigure the Server Station for using the new capacity. A floppy disk coming with the hard disk contains the necessary software. If some sectors of the floppy are corrupt, the file can also be downloaded from DigiNet:
CR/Processing Station/Documentation/Hard disk.

- Please note that the additional hard disk DELL 36GB ULTRA 160 SCSI HD comes in unformatted condition. Formatting is part of the installation procedure described in chapter 5 of this document.
- This option is only valid for an ADC QS Server Station.

2 Scope of Delivery

Order number:
EHVDJ ADC QS 36GB INT EXTRA HD

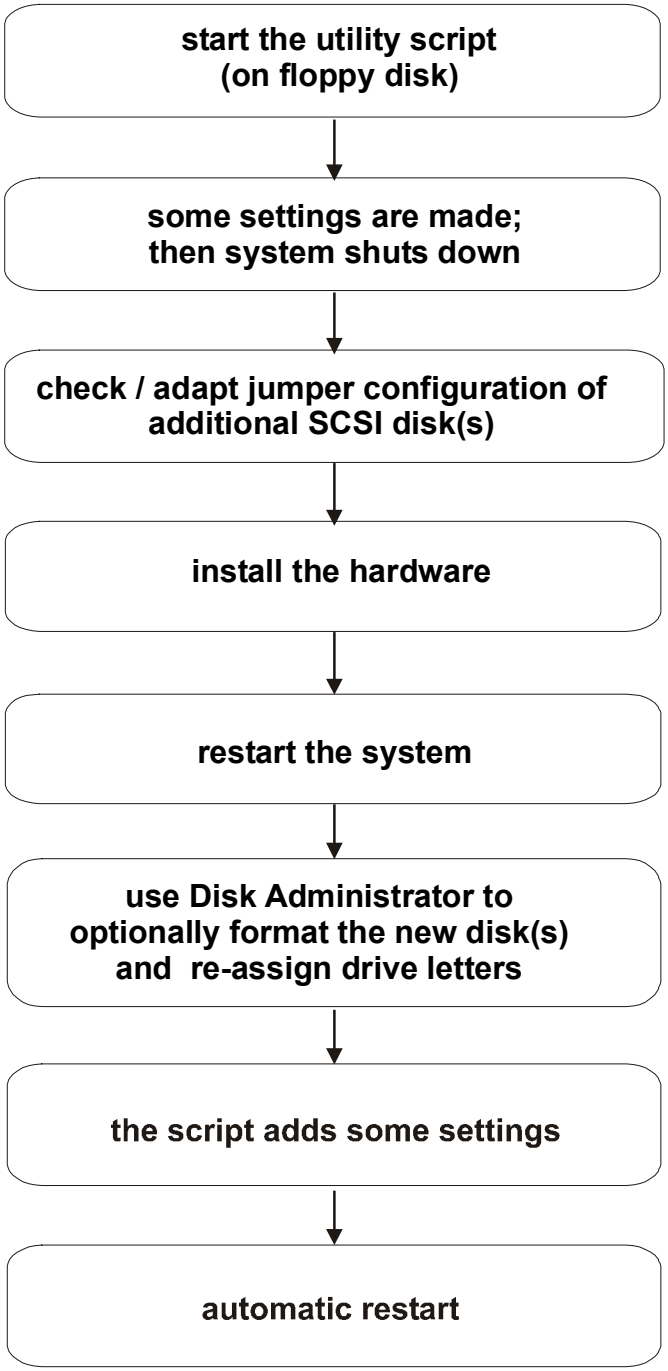
Contents :
1x DELL 36GB ULTRA 160 SCSI HD (unformatted)
1x Floppy disk containing *ADCQS ImageCacheExtender.exe*
1x installation documentation DD+DIS124.01E

3 Jumper Settings of Additional Hard Disks

- set SCSI ID 2 for the 1st additional hard disk
- set SCSI ID 3 for the 2nd additional hard disk

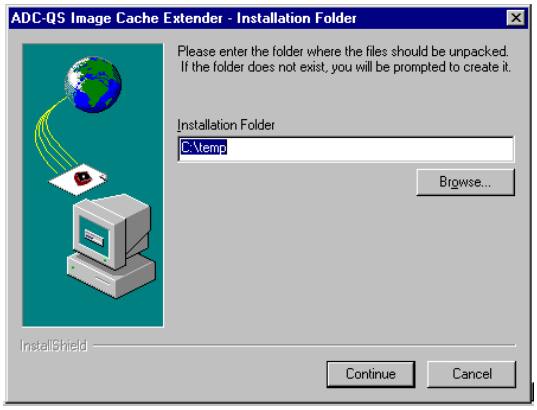
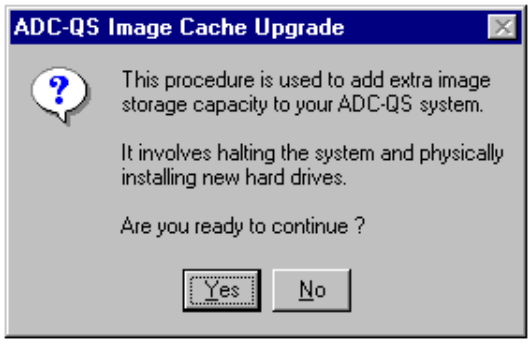
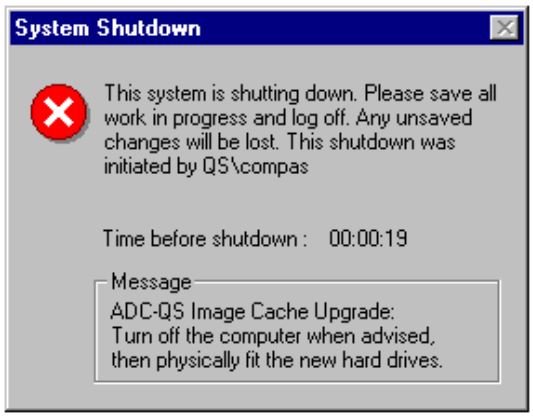
Jumper settings may differ according to the type of hard disk. Refer to the manufacturer's specification attached to the respective hard disk.

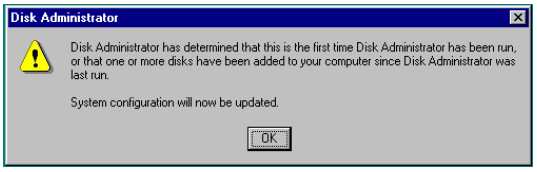
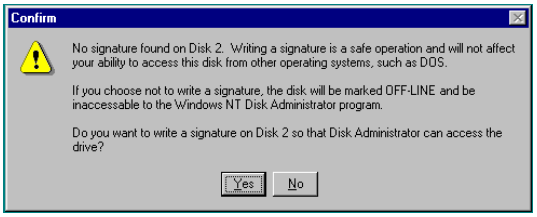
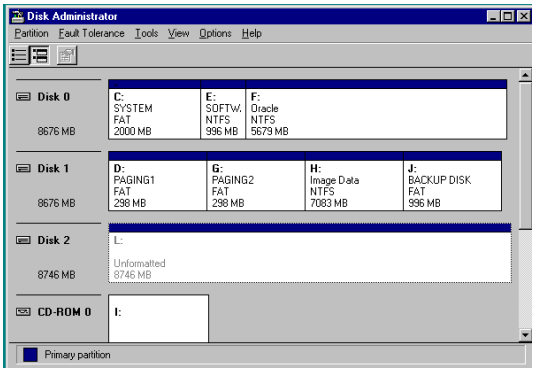
4 Overview of Installation Sequence

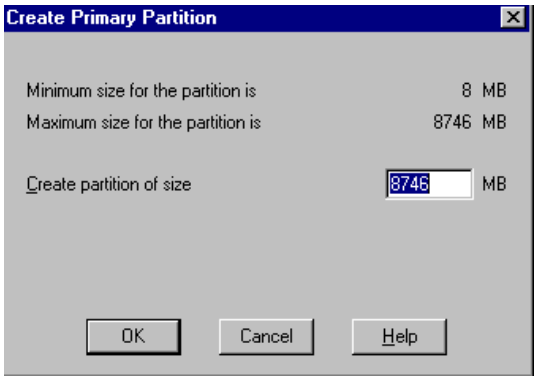
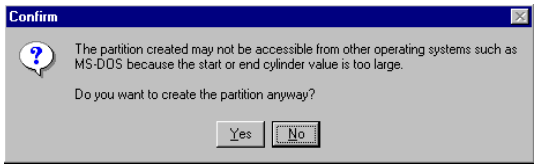
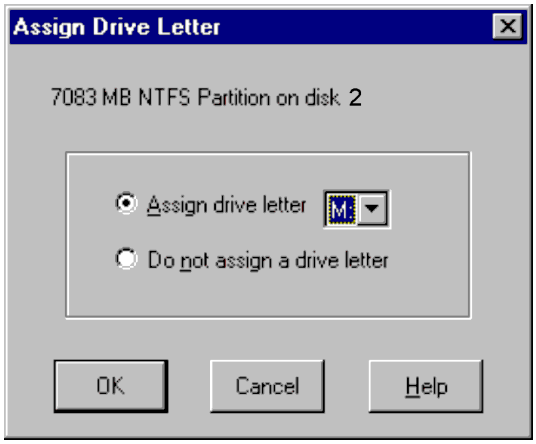
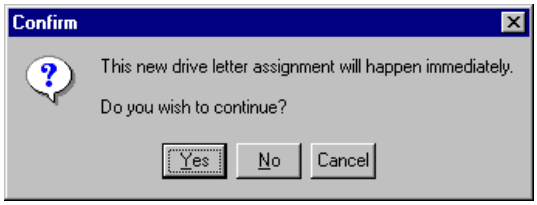


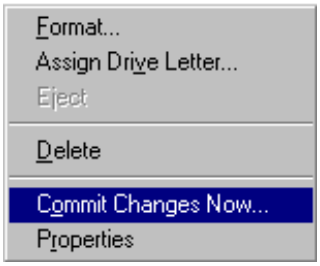
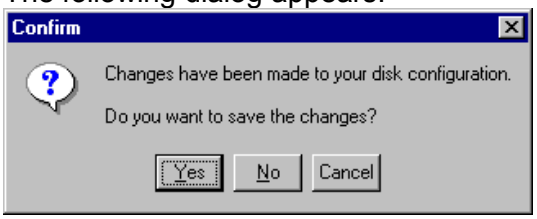
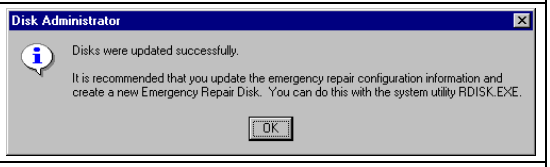
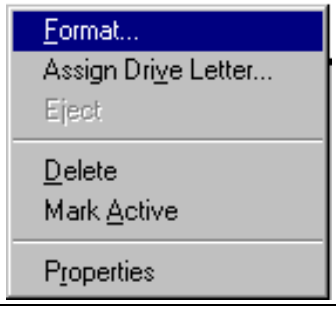
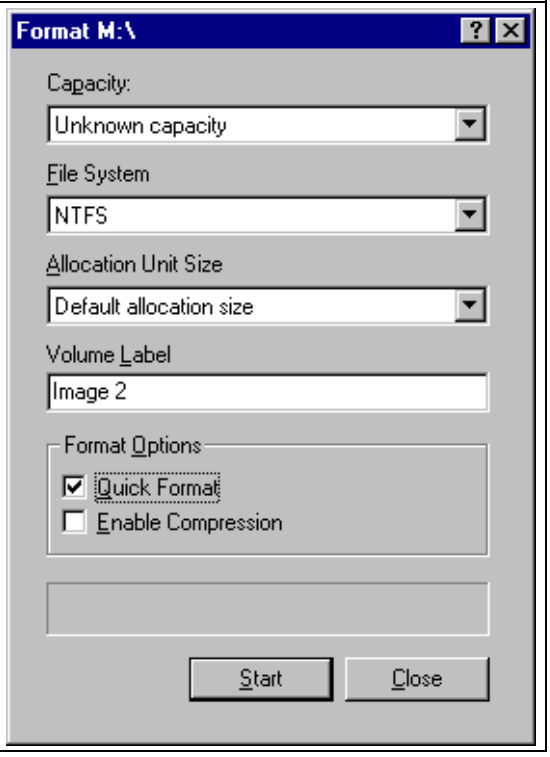
5 Installation and Start-up of Additional Hard Disk(s) (unformatted)

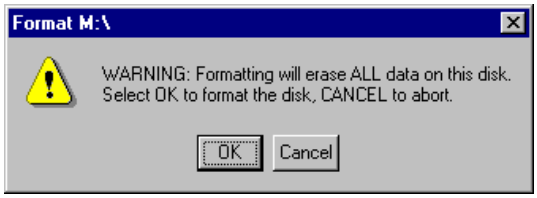
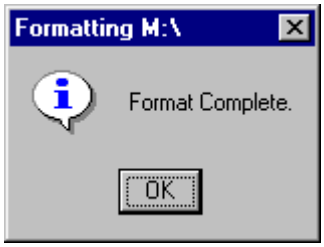
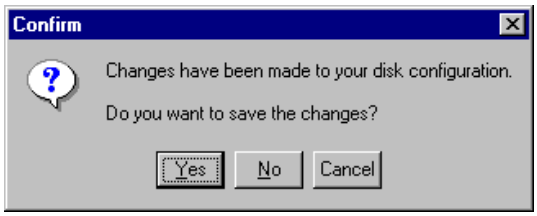
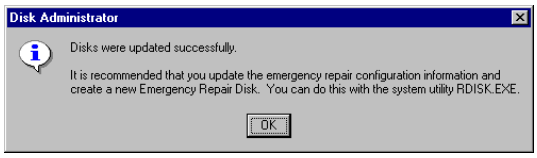
The following procedure only applies to unformatted hard disks.

No.	Procedure Steps	Display / Comment
1.	Insert floppy with *ADC-QS ImageCacheExtender.exe*	
2.	Run the self extracting file `ADC-QSImage CacheExtender.exe` (accept the default path for temporary files).	The following dialog appears: 
3.	Click `<Continue>`	The following dialog appears: 
4.	Click `<Yes>`	Some settings are made. Afterwards the system shuts down. 

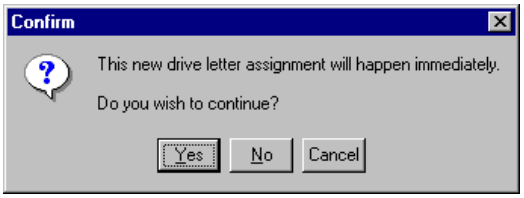
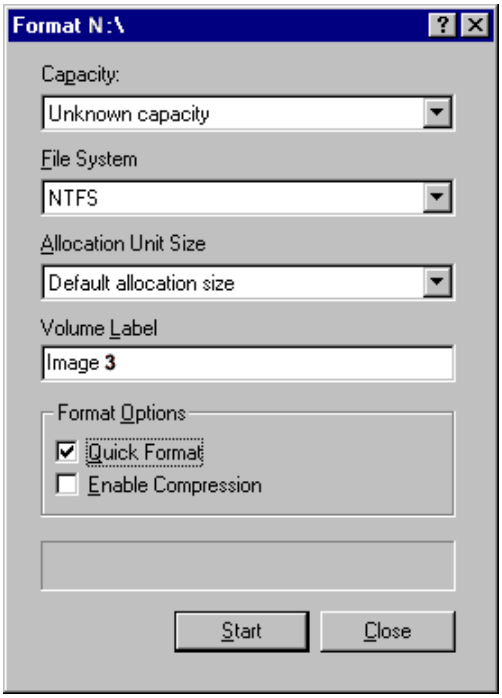
No.	Procedure Steps	Display / Comment
5.	Wait until the system has shut down and remove the floppy then.	
6.	Switch off the system.	
7.	Check / adapt jumper settings 1st extra disk = SCSI ID 2 2nd extra disk = SCSI ID 3	Consult the manufacturers stick-on graphic to check the actual jumper positions required for your disks (see chapter 3, page 1)
8.	Install the new disk(s) and attach cable and power connections	For removing the PC cover, refer to the PC user manual.
9.	Restart the system	
10.	Disk administrator is started automatically	A warning dialog appears saying that new disks have been added. 
11.	Click <OK> to continue.	A confirm window may appear: 
12.	Click <Yes> to continue.	The Disk Administrator dialog appears: 

No.	Procedure Steps	Display / Comment
13.	Move the mouse to partition "Disk 2" and use the right mouse button to select Create...	The Create Primary Partition dialog appears: 
14.	Click <OK>	A warning dialog appears: 
15.	Click <Yes>	
16.	Move the mouse to partition "Disk 2" and use the right mouse button to select 'Assign Drive Letter...' dialog to give it the drive letter **M**:	The Assign Drive Letter dialog appears: 
17.	Click <OK>.	A warning dialog may appear: 
18.	Click <Yes> to continue.	

No.	Procedure Steps	Display / Comment
19.	Move the mouse to partition "Disk 2" and use the right mouse button to select 'Commit changes now'	
20.	Click on 'Commit changes now'	The following dialog appears. 
21.	Click <Yes>	 Disk Administrator Disks were updated successfully. It is recommended that you update the emergency repair configuration information and create a new Emergency Repair Disk. You can do this with the system utility RDISK.EXE. OK
22.	Click <OK>	
23.	Move the mouse to partition "Disk 2" and use the right mouse button to select 'Format'	
24.	Format the volume with file system NTFS (right mouse button, 'Format'). Within the format dialog give also the volume name 'Image2'. Do not change 'Capacity' and 'Allocation Unit Size'. Activate <Quick Format>	 Format M:\ Capacity: Unknown capacity File System NTFS Allocation Unit Size Default allocation size Volume Label Image 2 Format Options Quick Format Enable Compression Start Close

No.	Procedure Steps	Display / Comment
25.	Click <Start>	A warning dialog appears: 
26.	Click <OK>	Formatting of hard disk. When finished, the dialog 'Format complete' appears. 
27.	Click <OK>	
28.	Close 'Disk Administrator'	
29.	Click <Yes>	
30.	Click <OK>	Installation of 1st additional hard disk completed.

Perform steps 31 - 34 only if you want to install a 2nd additional hard disk.

No.	Procedure Steps	Display / Comment
31.	If used, select the second new disk added (DISK 3) and use the right mouse button 'Assign Drive Letter...' dialog to give it the drive letter **N**:	The `Assign Drive Letter` dialog appears:
32.	Click `<OK>`	A warning dialog appears: 
33.	Click `<Yes>` to continue	
34.	Format the volume with file system NTFS (right mouse button, `'Format'`, see step 23). Within the format dialog give also the volume name `'Image3'`. Do not change `'Capacity'` and `'Allocation Unit Size'`. Activate `<Quick Format>`	
35.	Repeat steps 25 to 30.	Installation of 2nd additional hard disk completed. At the end of the installation the script adds some settings and restarts the system.

Chapter 6

3.
Integration of Touch Screen in ADC Quality System

DD+DIS024.02E

Order-No.: DD+DIS024.02E

1 Piece UUS5W MA1

ADC Quality System 2.0.xx

Type 4406 / 421

Integration of Touch Screen in ADC QS

Necessary time:
30 min.

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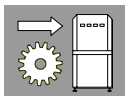
2 Touch screen Installation Procedure 1

2.1 Preparations 1

2.2 Installation 1

printed in Germany 02 / 2002

AGFA



1 Restrictions

The touch screen requires a serial port connection. If both of the serial ports are already connected, one to the ID-tablet and the other to the UPS, disconnect one of them. The UPS can still be used without the serial port connection to compensate short drops in mains, but no auto shutdown will be performed if the batteries are exhausted.

There is no upgrade planned to add a third serial port.

2 Touch Screen Installation Procedure

2.1 Preparations

(1) Select

`Start` on menu bar
`Settings`
`Control Panel`
`Connections`

and check that both COM ports are listed and therewith working.

(2) Select

`Start` on menu bar
`Settings`
`Control Panel`
`Display`
tab `Settings`

and check the following settings

- Resolution of screen: 768 x 1024
- Refresh rate: 60 Hz
- Color palette: True Color

(3) Shut down the computer and switch off CRT monitor

(4) Disconnect CRT monitor

2.2 Installation

(5) Connect the touch screen to

- VGA
- Serial port
- Audio (optional)
- Power supply

Find the installation instructions for connections in the user guide (chapter 2) which is delivered with the screen.

(6) Switch computer and touch screen on

(7) Insert driver CD-ROM, which is part of the enclosure of the monitor, and install the serial touch driver. Find further installation instructions in the monitor users guide (chapter 2).

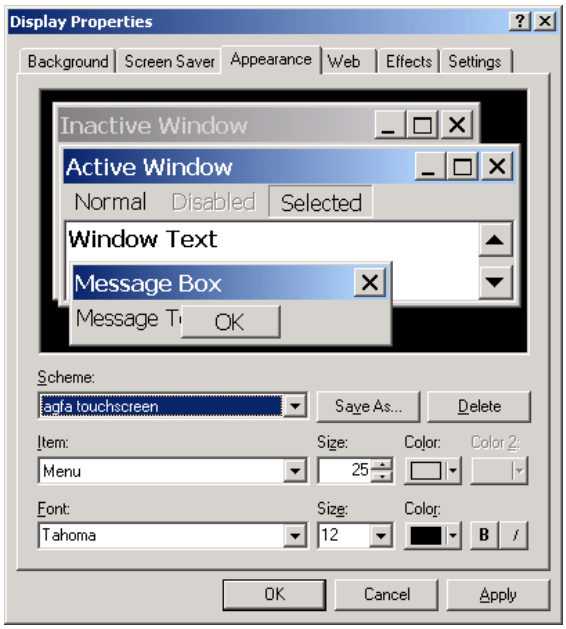
(8) Reboot computer

(9) Monitor calibration tool comes up; please follow the instructions on the screen.

(10) **Change Windows appearance settings**

Select

`Start` on menu bar
`Settings`
`Control Panel`
`Display`
tab `Appearance`



and set the following sizes

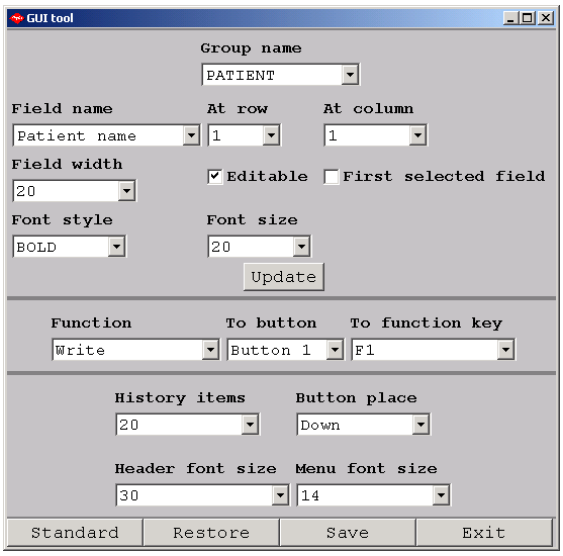
- Scrollbar size: 25
- Caption buttons size: 25
- Menu size: 25
- Font size: 12
- Active title bar size: 25
- Active title bar font size: 12
- Message text font size: 12

(11) **Change the PRID GUI**

Login PRID as system manager

Select at menu bar

```
Configuration
 System manager
  GUI tool…
```



and set the following sizes

- Font size: 22 (makes input boxes bigger) - set this for all fields which will be used in the GUI
- Header font size: 20
- Menu font size: 18

- Remove all input boxes which are not needed to see or never to change afterwards, to give a better overview on the screen.
- It is possible to change screen position of the button from bottom to right. On the right side the buttons appear bigger, but a lot of screen space is lost that way.

In several instances a keyboard is still needed. E.g. if the comment field is used or the RIS does not provide you with all data, you have to type in at the fields with the keyboard.

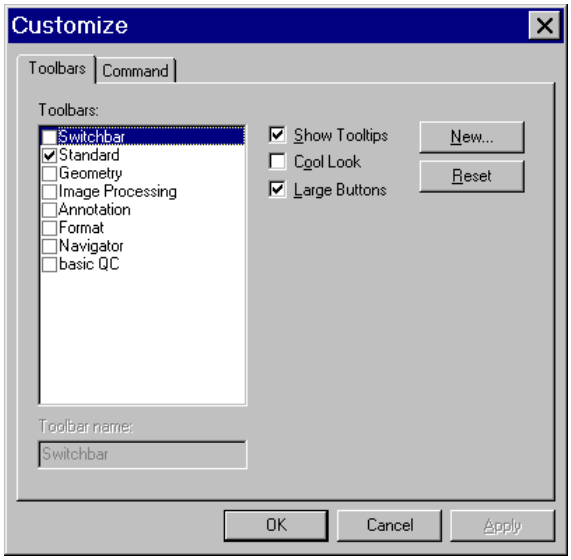
The mouse can be left out for the use of the PRID, but you still need it for the viewer or other applications (e.g. RIS).

(12) **Change the Basic-QCviewer GUI**

Start ADC QS: QC Viewer

To simplify the use of the QC viewer with a touch screen, all needed buttons are put together in one toolbar.

Select at menu bar
`Tools`
`Customize`
tab `Toolbars`



Select the `Standard` toolbar.
Uncheck `Cool Look` to make differentiation of the buttons easier.

- Include icons from the command pane to the toolbar by dragging them into the toolbar.
- To space the buttons in the toolbar drag them apart while customize toolbars dialog is open.

To use “annotations” you have to use the keyboard to type in the text. “Window” and “level” require a mouse and “free annotations” requires keyboard and mouse to operate.

Upgrades

7

Chapter 7

describes subsequent upgrades in the software resulting from technical changes.

MEDICAL IMAGING
CSO Customer Support Operations

Technical Documentation

Order-No.: DD+DIS248.01E

1 Piece UR8DF MA1

ADC Quality System

Type 4406/421

Software Installation Instructions for ADC QS 2.0.08

Upgrade from ADC QS 1.0.01 / 1.0.05 / 1.0.06 to ADC QS 2.0.08

This modification instruction is also enclosed to the modification kit EB+44060005.

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printed in Germany 12 / 2001

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1 General Information

Before starting the software installation read the appended Tips & Tricks.

1.1 Important Remarks

AGFA cannot guarantuee for proper working of the ADC QS Software if any other 3rd party software is running on the same computer.

If there is another Software (e.g. virus checking software) than the ADC QS Software components on the system, make sure that no other application is running during upgrade, installation or configuration of the ADC QS System!

1.2 Preparing the Upgrade to ADC QS 2.0.08

Adaptation of WIN NT Operating System to the local language

If you want to adapt the WIN NT Operating System language to the local language, you first have to apply the "Language Update Version 1.03" or higher. Please note, this is not a part of this package but is included in the upgrade kit "ADC_QS Upgrade 1.0.01 to 1.0.06" (Order Number: EB+44060723).

1.3 What is new in ADC QS 2.0.08?

- The reliability of the system increased considerably
- Up to three clients can be connected to one server
- Local languages available (English, French, Dutch, Spanish, German, Portuguese, Swedish)
- New supported printers (see appendix)
- Quick print stability is increased

1.4 Software Prerequisites

ADC Compact Digitizer:	≥ COP_1215,
ADC Solo Digitizer:	≥ SOL_1108,
PRID (Preview & Identification SW):	≥ PRID1.2.09

1.5 Scope of Delivery Software Kit ADC QS 2.0.08

(Order Number EB+44060005)
1 x ADC QS 2.0.08 Application CD
1 x ADC Service Pack 6.0 with Security Update CD version 1.05
1 x ADC Restore Toolkit 2.4 CD
1 x ADC QS PRINTER_PPD floppy disk
1 x ADC QS 2.0.08 Upgrade Documentation (DD+DIS239.01E)
3 x CD blank, 74 min. with label

1.6 Required Time for the Upgrade

- approx. 45 min. for the Server Station
- approx. 45 min. for the Client Station

2 Upgrade Procedure for ADC QS Server Station

2.1 Preparations

2.1.1 Toolbar Configuration

(1) Note down your toolbar configurations. They will be lost after the upgrade procedure

2.1.2 Empty Printer Queues

(2) Check that the printer queues of all your printers in the NT print spooler are empty.

(3) In case you have the printer AGFA Drystar SI100 and/or AGFA Drystar SI400 installed as PS printers, delete these printers!

2.1.3 Create site specific backup

(4) Start ADC QS Server Station and click <OK> to login

Make sure the ADC QS application is running.

(5) Make a backup
Select in the Start menu
AGFA
ADC QS
Configuration

(6) Stop the Gateway

(7) Select Monitoring
Task Management
Backup

(8) Click on <Modify>

Before making the backup, check the correct path of the backup directory and change, if necessary: **J:\BackupCompas**

If you had to change the directory, reboot ADC QS application and repeat steps (4) to (7).

(9) Click <Execute> to make a backup
This lasts about 10 min. (depends on the number of data)

Do not interrupt the backup! You can check the progress at the NT Explorer directory J:\BackupCompas by a growing file size.

In the ADC QS Task Manager the status of the backup task is not refreshed automatically. To refresh the status leave Task Manager and start it again.

ADC QS
Server

(10) Stop ADC QS

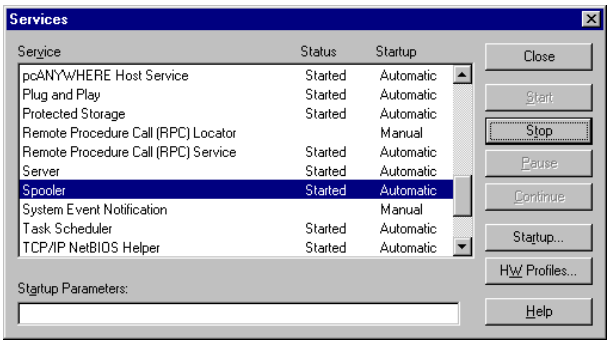
2.1.4 Stop “Spooler” and “World Wide Web Publishing” Services

(11) Stop NT-Service “Spooler”:

Select

```
Control Panel
    Services
        Spooler
```

and click <Stop>.

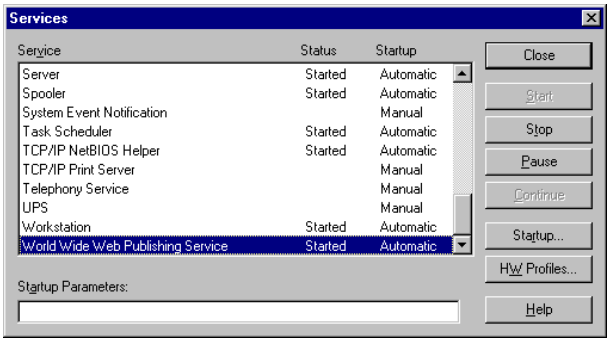


(12) Stop NT-Service “World Wide Web Publishing Service”:

Select

```
Control Panel
    Services
        World Wide Web Publishing Service
```

and click <Stop>.



2.1.5 Creating Restore CD of current Installation

See point 2.4.5 Creating the Restore CD

ADC QS

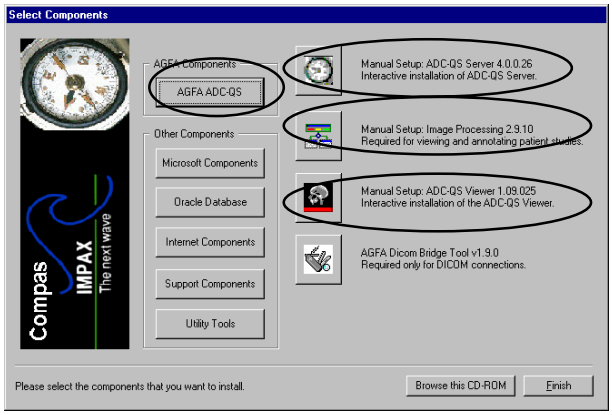
Server

2.2 Installation of Application

2.2.1 Installation of ADC QS Server Components

(1) Insert CD ROM with ADC QS Application Software

(2) Autostart starts the `Install Launcher`



(3) Select in `AGFA Components: <AGFA ADC QS>`

(4) Select
`<Manual Setup ADC QS Server>`

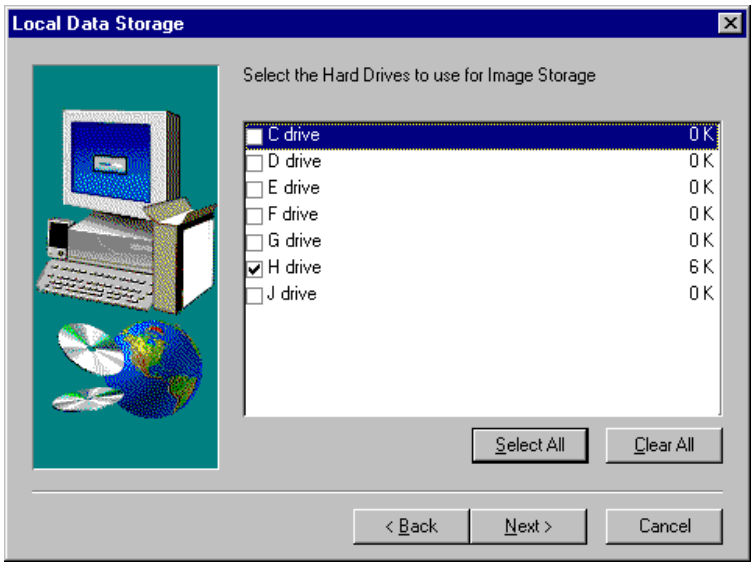
(5) Please read the `Software License Agreement` and click `<Yes>`, if you agree.

(6) Select the default path of `E:\Agfa\CompasServer` and click `<Next>`.

(7) Select the default path for `Server(Complete)` and click `<Next>`.

(8) Select the default folder `Agfa\ADC-QS` and click `<Next>`.

(9) Accept defaults (`H Drive`), or select to match required disk layout and click `<Next>`.



If additional hard disks are installed, it might be necessary to change the drive letter. Do always assign the drive letter of the image disk.

(10) Review information and click `<Next>` to accept, or `<Back>` to change any setting.
Copying starts, at end dialog `Setup Complete` appears.

(11) If you are asked to restart the computer, select `No, I will restart later`

(12) Click `<Finish>`.
The `Install Launcher` window appears again

2.2.2 Installation of ADC QS Image Processing Components

(13) Select in `AGFA Components: <AGFA ADC QS>`

(14) Select
`<Manual Setup Image Processing>`

(15) Click `<Next>` on `Welcome` window

(16) Select default `<Customer Installation>` and click `<Next>`

(17) Check that `E:\Agfa\Improc\ApnCre` is set, using the `<Browse>` button and click `<Next>`

(18) If the popup `The folder.... does not exist. Do you want it created?` appears, click `<Yes>`.
Files are copied, then the Dialog `Setup Complete` appears

(19) Click `<Finish>`.
The `Install Launcher` window appears again

ADC QS

Server

2.2.3 Installation of ADC QS Viewer Component

(20) Select in AGFA Components: <AGFA ADC QS>

(21) Select
<Manual Setup ADC QS Viewer>

(22) Click <Next> on Welcome window

(23) Please read the Software License Agreement and click <Yes>, if you agree

(24) Select default Typical and click <Next>

(25) Select the default path of E:\Agfa\ADC-QS\Viewer and click <Next>

(26) Select the default folder Agfa\ADC-QS and click <Next>

(27) Review information and click <Next> to accept, or <Back> to change any setting.
Files are copied

(28) Click <Finish> to complete Setup
The Install Launcher window appears

(29) Click <Finish> and reboot system at end

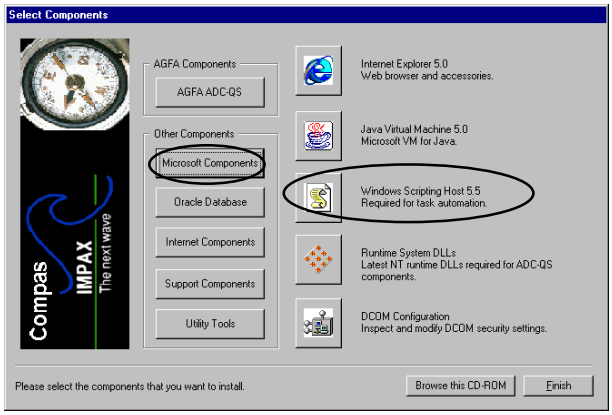
2.2.4 Updating Windows Scripting Host to version 5.5

(30) Stop ADC QS application

(31) Start up Install Launcher again (either by ejecting and re-inserting the CD or selecting setup.exe from the root directory)

(32) Select Microsoft Components

(33) Select Windows Scripting Host 5.5



(34) Click <Yes> in Windows Script Version 5.5 window

(35) Click <Yes> on License Agreement
Files are copied.

ADC QS
Server

(36) Confirm window Windows Script Version 5.5

(37) On question Restart Computer click <No>

(38) Finish the Install Launcher and eject ADC QS application CD

2.3 Additional NT Operating System Upgrades

2.3.1 Activating Posting Acceptor 1.01

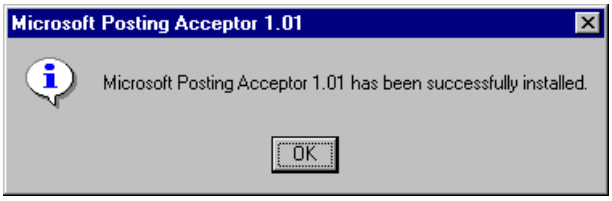
(39) Locate in NT Explorer the file `pak210-x86.exe` (filename may be abbreviated `pak210~1.exe`) in folder `C:\winnt\system32\setup`

(40) Execute `pak210-x86.exe`

(41) Dialog `MS Posting Acceptor 1.01` appears

Confirm License Agreement with `<Yes>`

(42)



Confirm window `Microsoft Posting Acceptor 1.01` with `<OK>`

(43)

Microsoft Posting Acceptor 1.01
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Click `<No>` on question `Restart the computer.`

2.3.2 Service Pack 6a Installation

(44) Insert “Security Update CD version 1.05” (or higher)

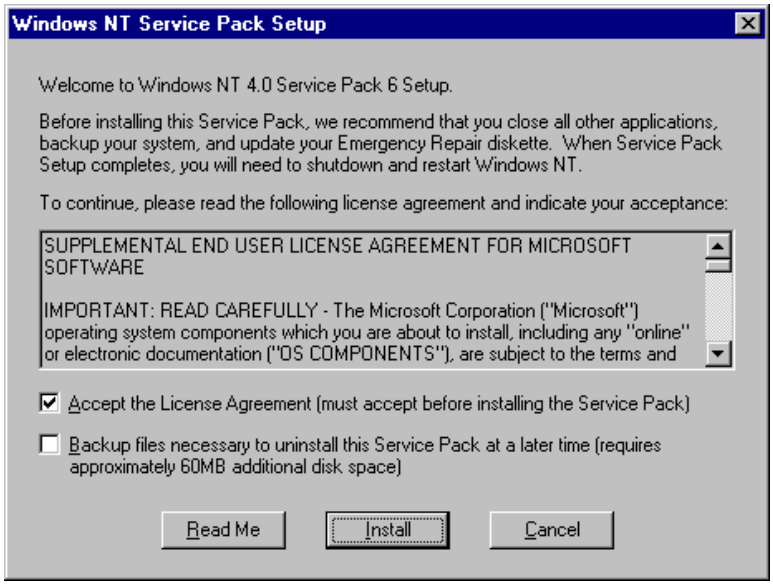
(45) Stop ADC-QS. Disconnect the network cable from the server PC.

(46) Locate via NT Explorer the file `'sp6i386.exe'` on the Security Update CD. As the service Pack is language dependant you have to select the file from the language folder your NT OS is installed with.

(47) Execute file `'sp6i386.exe' by double-clicking`

Files are extracted.

(48) Window `Windows NT Service Pack Setup` appears.
Check `Accept License Agreement...`,
Uncheck `Backup files necessary to uninstall...`, click on `<Install>`.


Windows NT Service Pack Setup
Welcome to Windows NT 4.0 Service Pack 6 Setup.
Before installing this Service Pack, we recommend that you close all other applications, backup your system, and update your Emergency Repair diskette. When Service Pack Setup completes, you will need to shutdown and restart Windows NT.
To continue, please read the following license agreement and indicate your acceptance:
SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE
IMPORTANT: READ CAREFULLY - The Microsoft Corporation ("Microsoft") operating system components which you are about to install, including any "online" or electronic documentation ("OS COMPONENTS"), are subject to the terms and
Accept the License Agreement (must accept before installing the Service Pack)
Backup files necessary to uninstall this Service Pack at a later time (requires approximately 60MB additional disk space)
Read Me
Install
Cancel

(49) Files are copied. At end click button to restart the system.

2.3.3 Security Update with “Security Rollup” Package

(50) Stop the ADC-QS application and disconnect the Network cable.

(51) Insert “Security rollup toolkit CD version 1.05” (or higher), if not done already

(52) Locate via NT Explorer the file `'CodeRedCleanup.exe'` on the Security Update CD.

(53) Copy it to the `c:\temp` folder

(54) Execute the file `c:\temp\CodeRedCleanup.exe` from a DOS command prompt.

(55) Locate in NT Explorer the Security Rollup Package (SRP) `'q299444.exe'`. The SRP is located in the relevant language folder of the ADC-QS Security Update CD (as xxxq299444.exe, where xxx is the language name prefix).

(56) Execute the SRP, then restart the system as suggested. The SRP will prevent the worm from re-infecting the system.

(57) Reconnect the network cable to the system and remove “Security rollup toolkit CD” from CD-ROM drive.

2.4 Finishing the Installation

2.4.1 Check Printer Properties

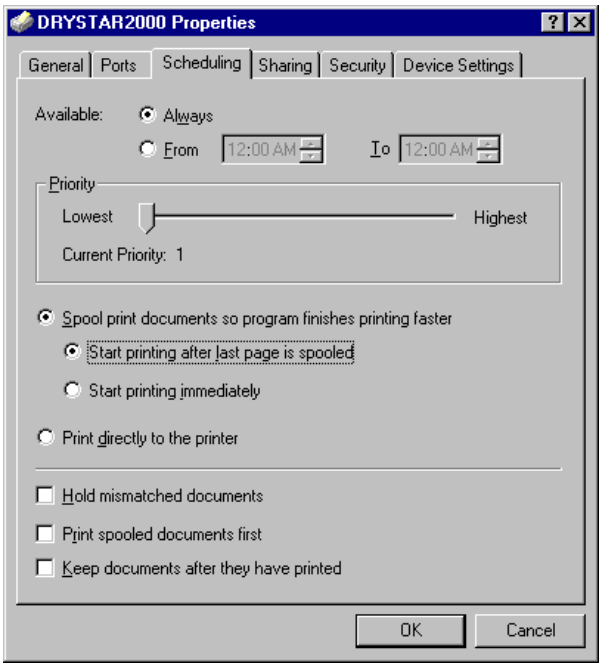
Check the following settings for every installed printer:

(1) Select
`Start`
`Settings`
`Printers`

(2) Move the mouse cursor to a printer and click right mouse button

(3) Select
`Properties`
`Scheduling`

(4) Set “Start printing after last page is spooled”



(5) Click `<OK>`

2.4.2 Set Regional Settings Properties (Activating Local Language for Application)

(6) Check and change local language if necessary.

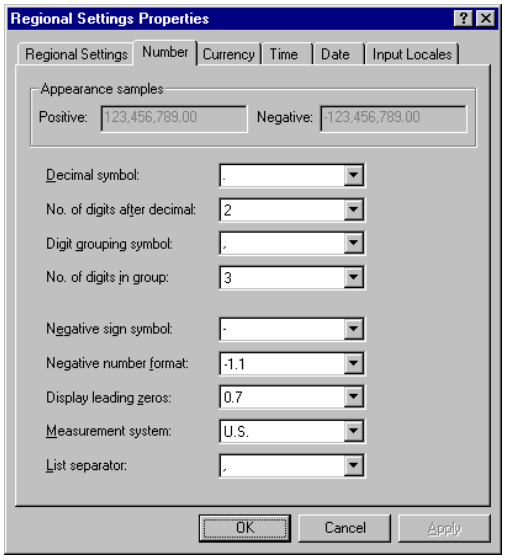
(7) Select
`Control Panel`
`Regional Settings Properties`
tab `Regional Settings`

Possible languages are: English, French, Dutch, Spanish, German, Portuguese, Swedish

ADC QS
Server

(8) Select
`Control Panel`
`Regional Settings Properties`
tab `Number`

(9) Check that the `<Decimal symbol>` is a point and the `<Digit grouping symbol>` is a comma.



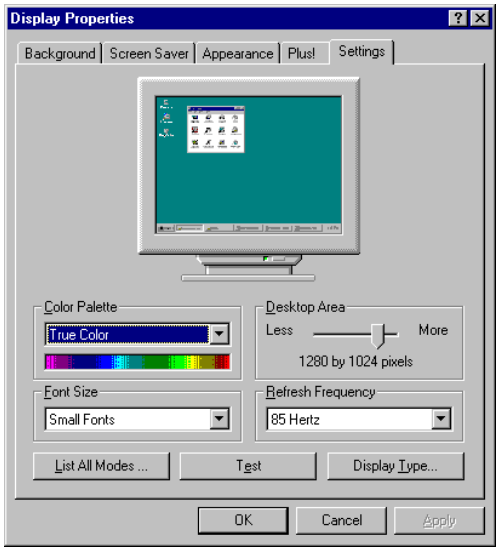
2.4.3 Check Display Settings

(10) Select
`Start`
`Settings`
`Control Panel`

(11) Select
`Display`
`Settings`

(12) Select tab `Settings`

(13) Set color palette to `True Color`



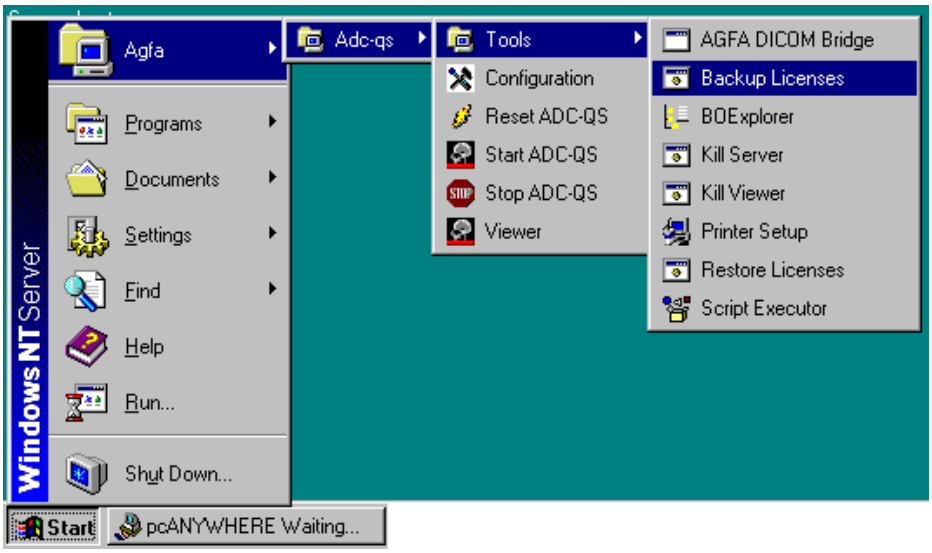
ADC QS

Server

2.4.4 Backup licenses of ADC QS Server

(14) Select

```
Start
 Agfa
  Adcqs
   Tools
    Backup Licenses
```



A backup is created.

2.4.5 Creating the Restore CD

2.4.5.1 General

To create on site a bootable Restore CD-ROM makes it possible to restore the server system at a later date back to the same identical state as it was by creation of the CD. Please pay attention to the following points:

- The CD must only be used on the PC where it was created!
- A Restore CD covers only an image of the first hard disk (partition C, E and F), the second hard disk is not saved.
- It is not possible at the moment to create a Restore CD for the Client Station.
- During the process the CD tray can open and close automatically; this is then part of the procedure.

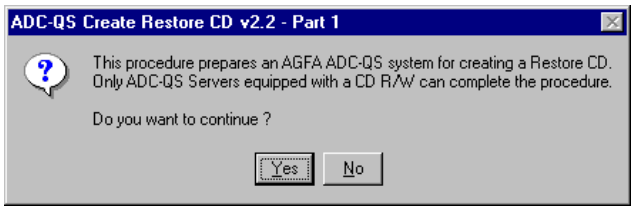
2.4.5.2 Requirements

- CD-ROM ADC-QS Restore Toolkit CD
- Blank or rewriteable CD

2.4.5.3 Procedure

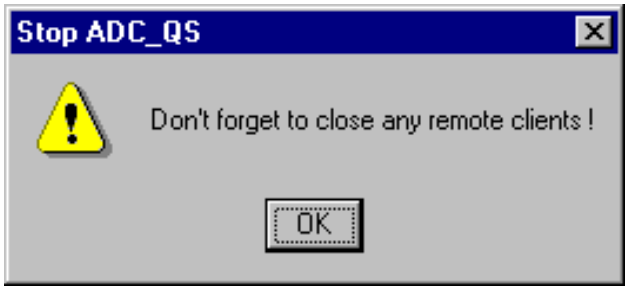
(15) Insert the ADC QS Restore Toolkit CD in the CD-ROM drive.
The CD starts automatically. If it does not start automatically, open file <Make_cd.bat> of the CD.

(16) <Create Restore CD> window appears.


ADC-QS Create Restore CD v2.2 - Part 1
This procedure prepares an AGFA ADC-QS system for creating a Restore CD.
Only ADC-QS Servers equipped with a CD R/W can complete the procedure.
Do you want to continue ?
Yes
No

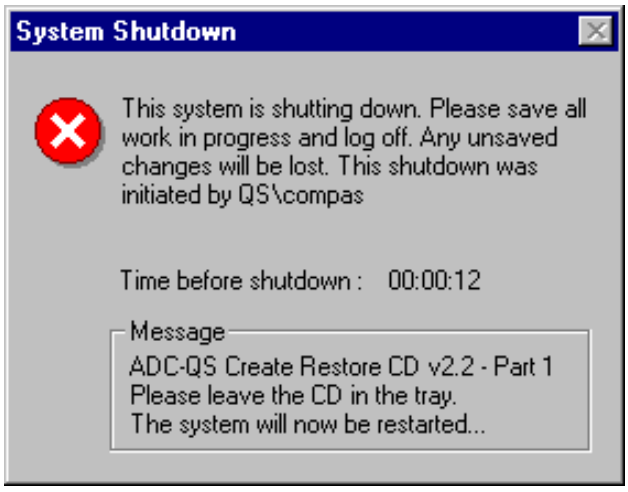
Click <Yes>

(17) Warning to close any existing ADC QS sessions appears.

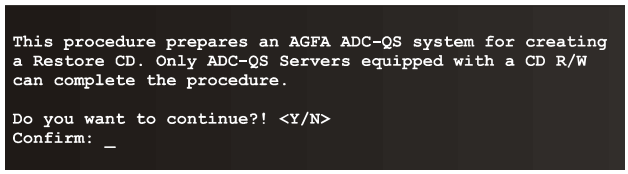


Click <OK>

(18) System shuts down.


System Shutdown
This system is shutting down. Please save all work in progress and log off. Any unsaved changes will be lost. This shutdown was initiated by QS\compas
Time before shutdown : 00:00:12
Message
ADC-QS Create Restore CD v2.2 - Part 1
Please leave the CD in the tray.
The system will now be restarted...

(19) Wait until DOS window appears

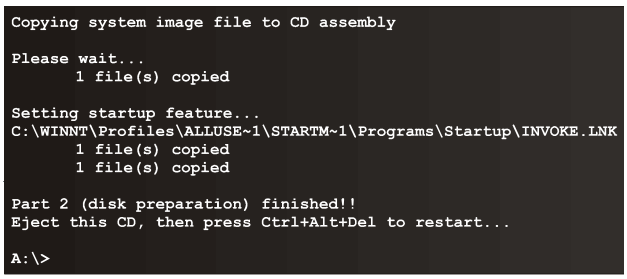

This procedure prepares an AGFA ADC-QS system for creating a Restore CD. Only ADC-QS Servers equipped with a CD R/W can complete the procedure.
Do you want to continue?! <Y/N>
Confirm: _

ADC QS
Server

Type in <Y> or wait until it is inserted automatically after a few seconds (Y corresponds to an American keyboard !)

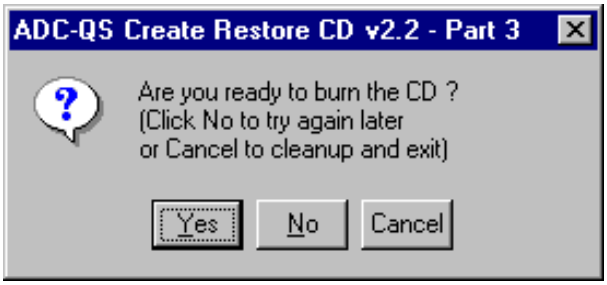
(20) Symantec Ghost program starts automatically and creates a system image of hard disk 1

(21) Wait until DOS window appears



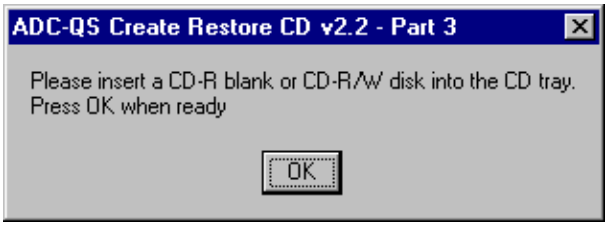
Eject the ADC QS Restore Toolkit CD and press <Ctrl+Alt+Del> to restart the system

(22) Wait until the scanning for CD Writer is finished and the selection window appears


ADC-QS Create Restore CD v2.2 - Part 3
Are you ready to burn the CD ?
(Click No to try again later
or Cancel to cleanup and exit)
Yes
No
Cancel

Click <Yes>

(23) Insert CD-R window appears.



Insert blank CD and click <OK>

(24) Various windows show progress.

(25) Eject the recorded CD and write

- "ADC-QS Server Restore CD"
- Date of creation
- Software version
- Creator of the CD

on it.

ADC QS Server

2.4.5.4 Testing the recorded Restore CD

(26) Insert the Restore CD and restart the system

(27) DOS selection window appears

```
+-----------------------------------------------+
!      AGFA ADC-QS Restore Server Utility       !
+-----------------------------------------------+


Press <1> to restore ADC-QS Server Disk1.
Press <2> to restore ADC-QS Server Disk2.

or <q> to quit (no action).

Select: _
```

Type in <q>
（For testing it is not necessary to carry out a restore procedure)

If the window does not appear, first check the boot sequence in the BIOS before creating a new Restore CD.

ADC QS

Server

3 Upgrade Procedure for ADC QS Client Station

Make sure that the ADC QS application on the server is running.
If it is not running the installation will not succeed!

3.1 Preparations

3.1.1 Toolbar Configuration

(1) Note down your toolbar configurations. They will be lost after the upgrade procedure

3.1.2 Empty Printer Queues

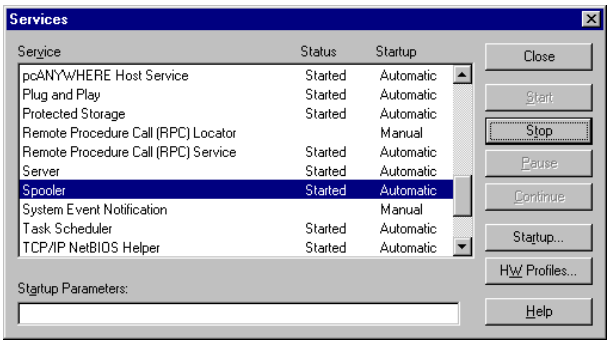
(2) Check that the printer queues of all your printers in the NT print spooler are empty.

(3) In case you have the printer AGFA Drystar SI100 and/or AGFA Drystar SI400 installed as PS printers, delete these printers!

3.1.3 Stop “Spooler” Services

(4) Stop NT-Service “Spooler”:

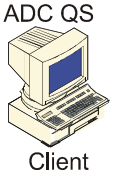
Select
`Control Panel`
`Services`
`Spooler`
and click `<Stop>`.



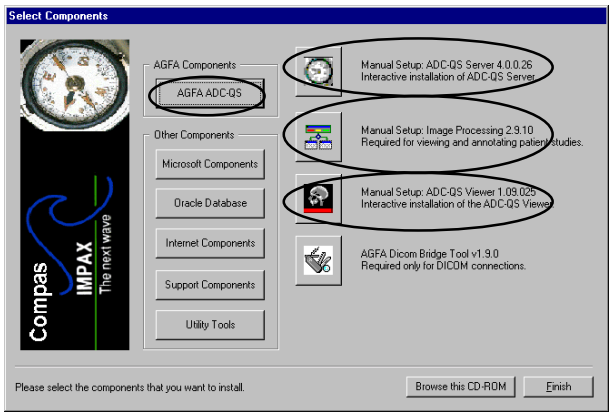
3.2 Installation of Application

(5) Stop ADC QS on the Client Station

(6) Insert CD-ROM with ADC QS Application Software.



(7) Autostart starts `setup.exe` on CD-ROM.
The `Install Launcher` starts



3.2.1 Installation of ADC QS Server Components

(8) Select in `AGFA Components: <AGFA ADC QS>`

(9) Please read the `Software License Agreement` and click `<Yes>`, if you agree

(10) Select
`<Manual Setup ADC QS Server>`

(11) Select the default path of `E:\Agfa\CompasServer` and click `<Next>`

(12) Select `<Client>`

(13) Select the default folder `<Agfa\ADC-QS>` *and* click `<Next>`

(14) Enter the IP-address of the server and click `<Next>`
Check if IP-address of ADC QS server is correct.

(15) Review information and click `<Next>` to accept, or `<Back>` to change any setting.
Files are copied.

(16) Click `<Finish>` to complete Setup.
The `Install Launcher` window appears.

3.2.2 Installation of ADC QS Image Processing Components

(17) Select in `AGFA Components: <AGFA ADC QS>`

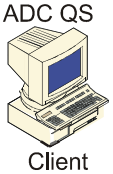
(18) Select
`<Manual Setup Image Processing>` and click `<Next>`

(19) Select default `<Customer Installation>` and click `<Next>`

(20) Select `E:\Agfa\Improc\ApnCre` using the `<Browse>` button, and click `<Next>`

(21) If the popup `The folder.... does not exist. Do you want it created?` appears, click `<Yes>` and `<Next>`.
Files are copied, then the Dialog `Setup Complete` appears

ADC QS



Client

(22) Click `<Finish>`
The `Install Launcher` window appears.

3.2.3 Installation of ADC QS Viewer Components

(23) Select in `AGFA Components: <AGFA ADC QS>`

(24) Select `Manual Setup ADC QS Viewer and` click `<Next>`

(25) Please read the `'Software License Agreement'` and click `<Yes>`, if you agree

(26) Select default `'Typical'` and click `<Next>`

(27) Select the default path of `E:\Agfa\ADC-QS\Viewer` and click `<Next>`

(28) Accept default `Agfa\ADC-QS`, click `<Next>`

(29) Review information and click `<Next>` to accept or `<Back>` to change any setting.
Files are copied.

(30) Click `<Finish>` to complete Setup

(31) Click `<Finish>` again and reboot system at end

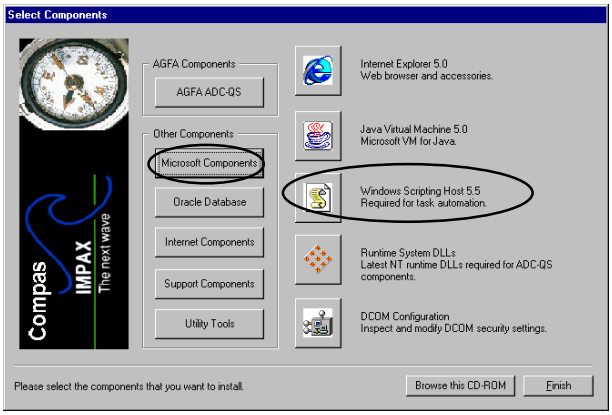
3.2.4 Updating Windows Scripting Host to version 5.5

(28) Stop ADC QS application

(29) Start up `Install Launcher` again (either by ejecting and re-inserting the CD or selecting setup.exe from the root directory)

(30) Select `Microsoft Components`

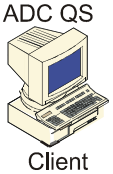
(31) Select Windows Scripting Host 5.5



(32) Click <Yes> in `Windows Script Version 5.5` window

(33) Click <Yes> on License Agreement
Files are copied.

ADC QS



Client

3.3 Additional NT Operating System Upgrade

3.3.1 Service Pack 6a Installation

(34) Insert “Security Update CD version 1.05” (or higher)

(35) Stop ADC-QS. Disconnect the network cable from the client PC.

(36) Locate via NT Explorer the file `'sp6i386.exe'` on the Security Update CD. As the service Pack is language dependant you have to select the file from the language folder your NT OS is installed with.

(37) Execute file `'sp6i386.exe' by double-clicking`

Files are extracted.

(38) Window `Windows NT Service Pack Setup` appears.
Check `Accept License Agreement...`,
Uncheck `Backup files necessary to uninstall...`, click on `<Install>`.

(39) Files are copied. At end click button to restart the system.

3.3.2 Security Update with “Security Roll-up” Package

(40) Stop the ADC-QS application

(41) Insert “Security Update CD version 1.05” (or higher), if not done already

(42) Locate via NT Explorer the file `'CodeRedCleaner.exe'` on the Security Update CD.

(43) Copy it to the `c:\temp` folder

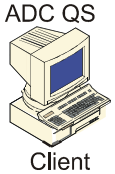
(44) Execute the file `c:\temp\CodeRedCleaner.exe` from a DOS command prompt.

Note that the execution of this step in Client results in an error since one of the components being cleaned does not exist. The error message can be ignored.

(45) Locate in NT Explorer the Security Rollup Package (SRP) `'q299444.exe'`. The SRP is located in the relevant language folder of the ADC-QS Security Update CD (as xxxq299444.exe, where xxx is the language name prefix).

(46) Execute the SRP, then restart the system as suggested. The SRP will prevent the worm from re-infecting the system.

(47) Reconnect the network cable to the system and remove “Security Update CD” from CD-ROM drive



3.4 Finishing the Installation

3.4.1 Set Regional Settings Properties (Activating Local Language for Application)

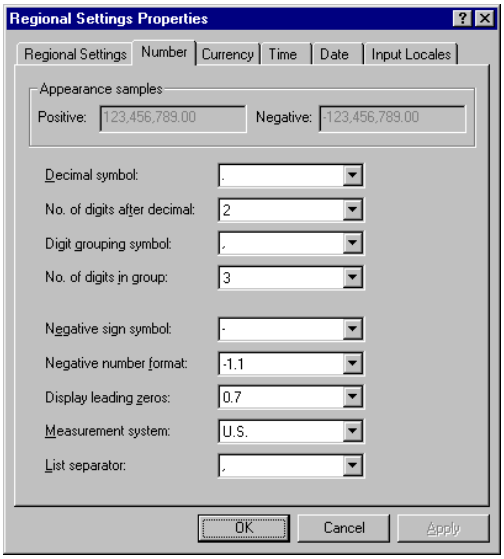
(1) Check and change local language if necessary.

(2) Select
`Control Panel`
`Regional Settings Properties`
tab `Regional Settings`

Possible languages are: English, French, Dutch, Spanish, German, Portuguese, Swedish

(3) Select
`Control Panel`
`Regional Settings Properties`
tab `Number`

(4) Check that the `<Decimal symbol>` is a point and the `<Digit grouping symbol>` is a comma.



3.4.2 Check Display Settings

(5) Select
`Start`
`Settings`
`Control Panel`

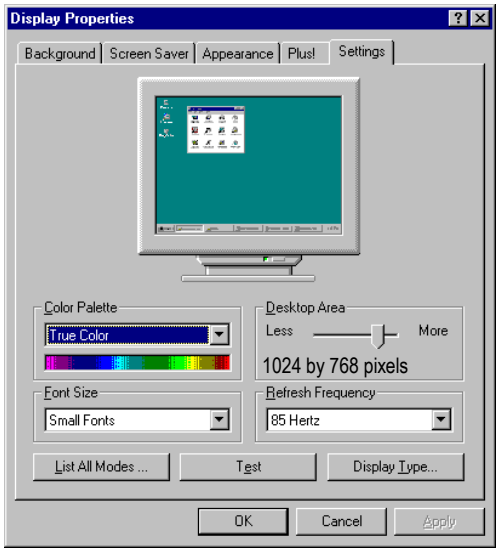
(6) Select
`Display`
`Settings`

(7) Select tab `Settings`

ADC QS

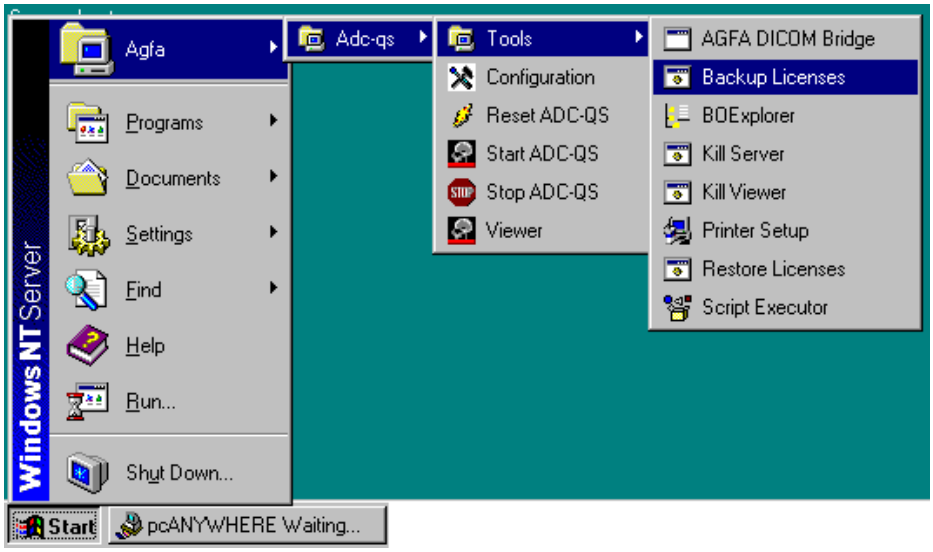
Client

(8) Set color palette to `True Color`

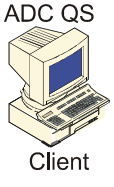


3.4.3 Backup licenses of ADC QS Client

(9) Select
`Start`
`Agfa`
`Adcqs`
`Tools`
`Backup Licenses`



A backup is created.



4 Open Issues (ADC QS 2.0.08)

Birth date field is empty
When birth date field is not entered in PRID then the field remains empty in ADC QS (no default date is put in).

Study info in selector only shows info about first image of study
When the user selects a record in the list view pane and goes to study info via the tools menu, only the info about the first image is visible. It is not possible to access the info for the other images.

Print Composer printing
When printing from Print Composer no “Done” status for printing is shown in List View Pane.

Tasks interrupting by “Deactivate” button may hang up tasks
When status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

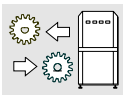
ACCESS_VIOLATION error
If an image is deleted on one of the QC viewers the thumbnail of a deleted image remains and an ACCESS_VIOLATION error occurs. To get rid of this thumbnail refresh by using the “F5” key or closing ADC QC viewer and opening again.

Textbox field is not updated automatically
If the default Print Textbox is used, it does not show examination name on the hardcopy. In the default textbox the correct field `ICRProcedureStepDescription` has been changed to `IProcedureDescription`, which is an empty field in the BOExplorer. The consequence is that instead of the correct data there is now an empty space when you apply the default Print Textbox. Workaround: If the default Print Textbox is used, the field `IProcedureDescription` must be changed manually to `ICRProcedureStepDescription`.

Windows application not able to close while ADC QS is running
When ADC QS is running on a server and you open a window application e.g. the control panel to change date / time, you can not close the application anymore. It stays open as long as the ADC QS is running. By stopping the ADC QS the application is also closed and the changed settings are stored.

Task manager shows QC Phantom task to be ACTIVE
The QC Phantom task can be ignored. It is not available in ADC QS 2.0.08.

Refreshing task manager status
Changed status of the task manager screen is not refreshed automatically. Workaround: To see the actual status, leave the task manager and open it again.



Basic QC viewer sometimes not auto refreshed
Basic QC viewer is sometimes not refreshed automatically. Workaround: Use “F5” key to refresh screen.

Text field entries are reset to default
Demographic data to be displayed under images and thumbnails are reset to default after leaving the application.

Slightly slow display on Client
Display of images and other actions are slightly slower on ADC QS Client PC than on Server.

Difficult identification of print jobs in NT Spooler queue
In the NT Print Spooler it is difficult to identify a print job. If the print job is created by “autoprinting” the patient name is used as print job name; if it is created by interactive printing (Quick Print, Print Composer) only the layout number is visible.

Exporting of GUI
Part of the Graphical User Interface (GUI) cannot be copied and exported to other servers and clients (e.g. toolbar configuration).

Toolbar configuration
Toolbar configuration is lost after the upgrade procedure. The toolbar configuration is not stored per user.

Magnification value on hardcopy
“Magnification value” should not be used, because the value is incorrect. It is not possible to show the correct scaling factor of an image on a hardcopy at the moment.

Burn function
Inversion from black to white does not work proper all the time. Lost energy regions are indicated as black, not black and white (white is inverted, black is not inverted).

Cut off ruler on hardcopy
It is possible to print a ruler on a hardcopy, but if it is printed in true size and this size is larger than the printable area, the ruler will be cut off.

Correction of demographic data
It is not possible to correct demographic data in Basic QC viewer.

Image quality bad
Image quality after transmitting a manually window leveled image to Impax can be bad on Impax version 3.5 in some cases.

Transmission to Impax fail
Manual transmission to Impax fails if started from the dialog box that states that a transmission is ongoing. The status of the transmission is not set to “done” so the user can see that it was not successful and retry.

Film media type can not be changed
The film media type is always blue base, in case a change is needed contact GSC.

Images of one studies are put into two different folders
This problem may occur in the following occasions:

- A study of two or more images is created on PRID. There is a delay of the entering the cassettes in the digitizer which is greater than the IN_PROGRESS timeout.
- A study with more than two images on the PRID is created. The first image arrives at the QC viewer and it is rejected by the user. The second images which arrives on the QC viewer is then put into a different folder then the first one. The third and all later images coming in are again put into the first folder, but never appear on QC viewer! You have to change to IPD to view all of the images.

1 Adding Medical Printers to ADC QS Server Station

1.1 Installing ppd-files from floppy

(1) Insert the floppy disk “ADC QS PRINTER_PPD”

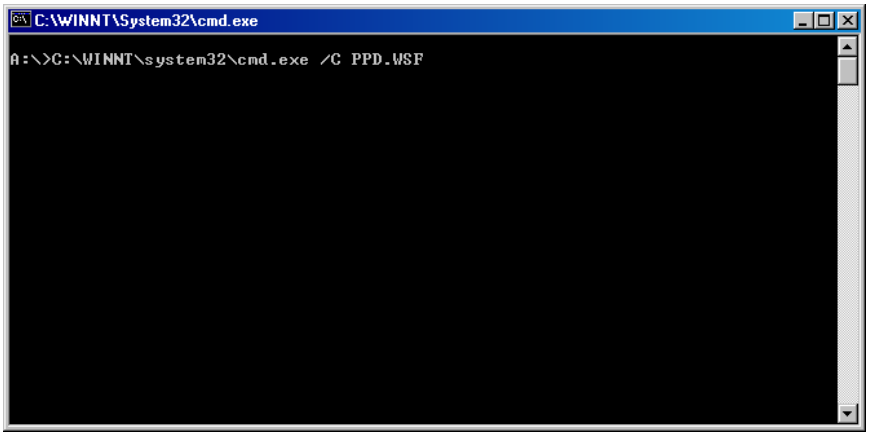
(2) Select

`<Start>`

`<Run>`

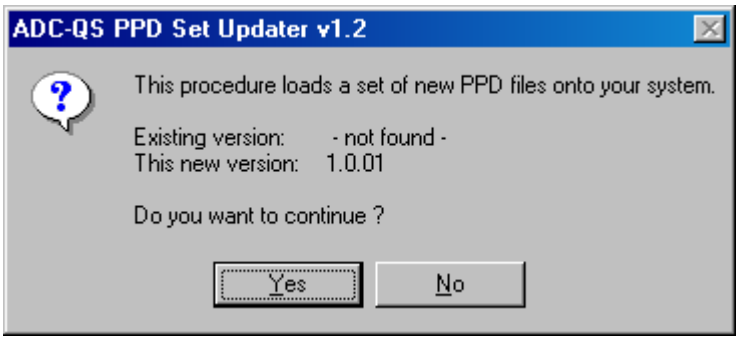
Type: `a:\setup.bat`

DOS windows opens:



No action required.

(3) The ADC QS PPD Set Updater window appears :


ADC-QS PPD Set Updater v1.2
This procedure loads a set of new PPD files onto your system.
Existing version: - not found -
This new version: 1.0.01
Do you want to continue ?
Yes
No

Note :
If there was a version installed before, you will see the version number displayed at “Existing version:”.

Click `<Yes>` to continue.

(4) System is checking for administrator rights.
No action required.

(5) If ADC QS application is running, it will be closed.
No action required.

(6) New PPD files will be copied from the floppy to the system
No action required.

(7) At the end, the application is starting up again if it was running before. When it was not running when starting the installation of the ppd-files, it is not starting up.

(8) ADC QS PPD Set Updater window appears :

Click <OK> to confirm

Note :

The amount of files transferred depends on how many ppd files are copied over from the floppy to the system. This will grow when more printers (more ppd files) are added to the floppy.

1.2 Adding printer to ADC QS

Note that any new printer has to be added to the CPF-file via CCM tool before you start the following procedure

Stop the application and start Configuration Viewer only

(9) Select
`<Start>`
`<Agfa>`
`<Adcqs>`
`<Configuration>`

(10) The `Configuration Viewer` login appears.
Press `<OK>` to login
(no user name or password required)
The `Configuration Viewer` starts up.

(11) Insert the floppy disk with the cpf-file *adc.cpf*

(12) Select
`<File>`
`<Import CPF ...>`

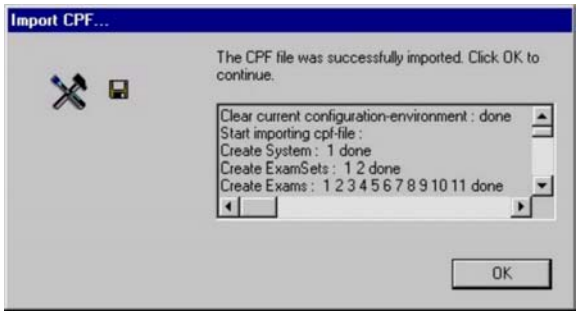
(13) The `Import` window appears.

Select floppy drive

Select cpf-file to be imported.

(14) Click `<Open>` button to start import.

(15) `Import CPF ...` window appears.


Import CPF...
The CPF file was successfully imported. Click OK to continue.
Clear current configuration-environment : done
Start importing cpf-file :
Create System : 1 done
Create ExamSets : 1 2 done
Create Exams : 1 2 3 4 5 6 7 8 9 10 11 done
OK

CPF-file is imported. This may take some time depending on the size of the CPF-file.

(16) When finished the `Printer Configurator` window appears.

The printers displayed in the list are known to the application now, but still have to be configured in the NT environment.

Write down the name of the printer (case sensitive) to be installed as it will be needed further on in this procedure (step (25)).

(17) Select a printer from the list and click `<Install>`

(You can only install one printer at a time).

(18) Welcome screen appears.

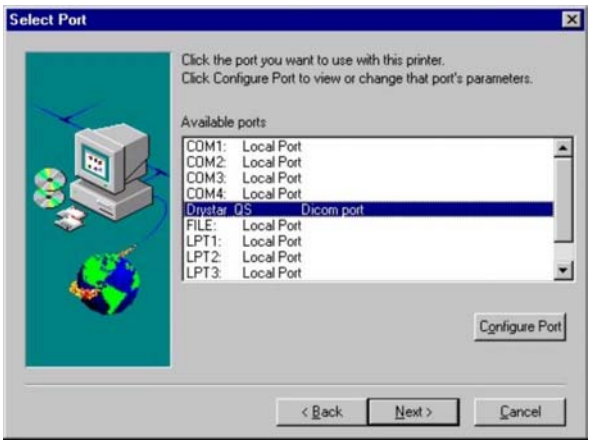
Click `<Next>`

(19) Click `<ACCEPT>` for license agreement.

(20) `Printer Connection Type` screen appears.

Select “It is directly connected to your computer (Local Printer)” and click `<Next>`

(21) `Local Port Selection` window appears.



Select the DICOM port for your printer and click `<Next>`

(The proper port contains the destination name of the printer like in CPF-file and the term Dicom Port.)

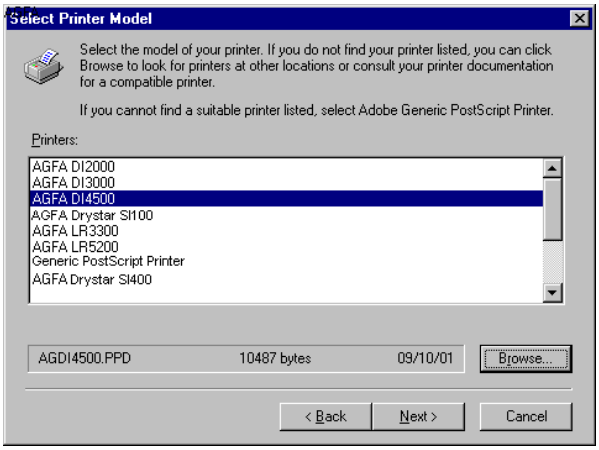
(22) `Select Printer Model` window appears

Click `<Browse>`

Select directory `E:\Agfa\CompasServer\Printer Setup\ppd` and select your printer type from the list.

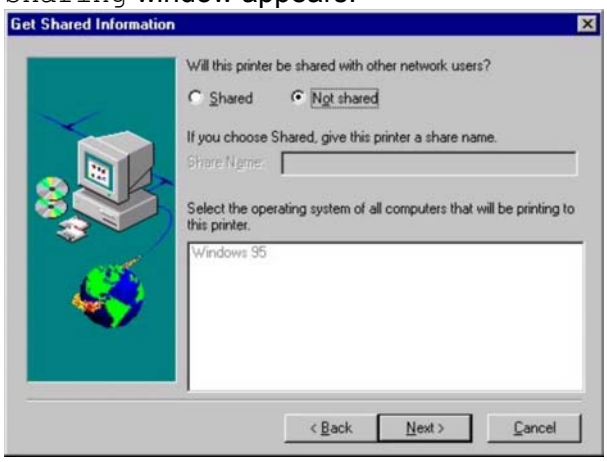
Click `<OK>`

(23) `Select Printer Model` window appears again


Select Printer Model
Select the model of your printer. If you do not find your printer listed, you can click Browse to look for printers at other locations or consult your printer documentation for a compatible printer.
If you cannot find a suitable printer listed, select Adobe Generic PostScript Printer.
Printers:
AGFA DI2000
AGFA DI3000
AGFA DI4500
AGFA Drystar SI100
AGFA LR3300
AGFA LR5200
Generic PostScript Printer
AGFA Drystar SI400
AGDI4500.PPD
10487 bytes
09/10/01
Browse...
< Back
Next >
Cancel

Click `<Next>`

(24) `Sharing` window appears.


Get Shared Information
Will this printer be shared with other network users?
Shared
Not shared
If you choose Shared, give this printer a share name.
Share Name:
Select the operating system of all computers that will be printing to this printer.
Windows 95
< Back
Next >
Cancel

The selection depends on whether you want to print from the ADC QS Server only, or if a client station should also be able to use the printer.

If the printer should also be available from the client, select `<Shared>` and enter a name for the shared printer.

Click `<Next>`

(25) `Printer Information` window appears.

Delete the printer name in the field and enter the destination name of the printer noted down before.

If it is the second printer, you can select it as default printer.
Select `<No>` for “Would you like to print the testpage”
and click `<Next>`

(26) `Setup Information` window appears.

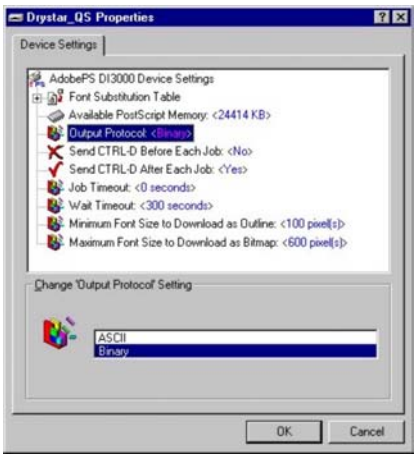
Check if everything is OK and click `<Install>`

(27) If the “Read only file detected” dialog appears, click `<Yes>`

(28) `Printer Configuration` window appears

Select `<Yes>` on “Would you like to configure your printer now?”
and click `<Next>`

(29) The `Device Settings` window appears.



Select `<Output Protocol>` and set it to `<Binary>`

Click `<OK>`

(30) `Setup complete` window appears.

Uncheck “Yes I want to read the ReadMe file” and click `<Finish>`

(31) The `ConfigView` window asks you to print a testpage. Click `<No>`

(32) Repeat steps (16) to (31) for all printers in the list.

(33) Click `<Cancel>` when finished and `<OK>` on `ConfigView` info window

(34) Click `<OK>` on “Importing CPF-file window”

(35) Reset ADC QS application

1.3 Troubleshooting

If the **printer configuration failed** for whatever reason go on that way:

- Check that printer queue is really empty
- Remove the printer from the cpf-file
- Stop ADC QS
- Start only `ConfigViewer`
- Import cpf-file
- Remove the printer from NT-Printer settings, if it is still there
- Add the printer again to the cpf-file and import the cpf-file again
- Start printer configuration again and follow exactly the instructions!

2 Adding Medical Printers to ADC QS Client Station

Printers which should be available for printing on the client station must have the status "shared" for network access on the server station.

The server station must be up and running.

(1) Stop the ADC QS application

(2) Click on NT Start button

(3) Select
`Settings`
`Printers`

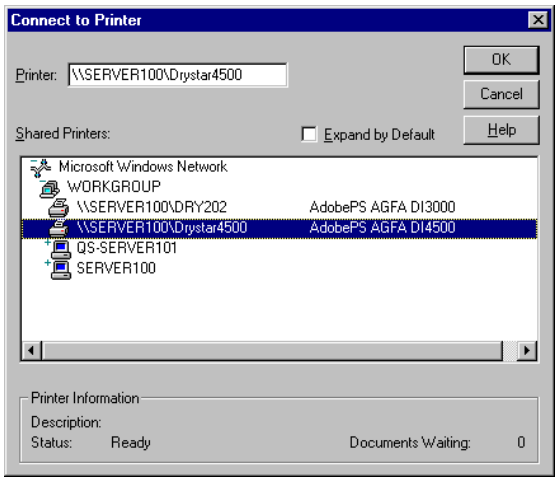
(4) Double click `Add Printer`

(5) Add Printer wizard starts

Select `Network printer server`

and click `<Next>`

(6) `Connect to Printer` window appears



Browse (double click) and locate the printer

Click `<OK>`

(7) Select `<No>` on question “Do you want your windows based programs to use this printer as the default printer?” (appears only from 2nd printer on)

Click `<Next>`

(8) Click `<Finish>`

3 Supported printers

Printers	Corresponding ppd-files
AGFA DI2000	**AGDI2000.ppd**
AGFA DI3000	**AGDI3000.ppd**
AGFA DI4500	**AGDI4500.ppd**
Agfa Drystar SI100	**AGSI1001.ppd**
Agfa Drystar SI400	**AGSI4001.ppd**
AGFA LR3300	**AGLR3300.ppd**
AGFA LR5200	**AGLR5200.ppd**
KODAK IM8100	**KDIM8100.ppd**
KODAK IM8300	**KDIM8300.ppd**
KODAK IM8500	**KDIM8500.ppd**
KODAK IM8600	**KDIM8600.ppd**
KODAK IM8700	**KDIM8700.ppd**
KODAK KELP2180/KELP1120	**KDLP2180.ppd**

The printers **Agfa Drystar SI100** and **Agfa Drystar SI400** can be installed as normal DICOM printers and it is not necessary to install them as PS printers. **Before** upgrading to version 2.0.08 you have to delete them as PS printers and install them after the upgrade with the correct ppd-file as DICOM printers.

1 ADC QS : Tips & Tricks for ADC QS 2.0.08

1.1 Installation

- **Printers on a client** system should be installed through the NT 'Add printer' wizard. 'Synchronize printers' is not available in the ConfigViewer on client systems.
- The ADC QS application must be **stopped** before **installing printers**.
- The **Adobe wizard** has to be stopped after each printer installation (i.e. on the server).
- The printer setting should be set to **spool the print job** before print.
- The **Agfa Drystar SI100** and **Agfa Drystar SI400** can be installed as normal DICOM printers. Before upgrading you have to delete them as PS printers and install them after upgrading with the correct ppd-file as DICOM printers.
- If a **printer configuration failed** for whatever reason go on that way:
  - Check that printer queue is really empty
  - Remove the printer from the cpf-file
  - Stop ADC QS
  - Start only Configuration Viewer
  - Import cpf-file
  - Remove the printer from NT-Printer settings, if it is still there
  - Add the printer again to the cpf-file and import the cpf-file again
  - Start printer configuration again and follow exactly the instructions!
- Layouts like 10INx12IN on DI4500 are called **New Vips layouts** or **no-MG3 layouts**. These layouts can be generated only if the cpf-file supports them. The table PS in the cpf-file needs to be changed : set **all_film_format_printing = 'Y'** for each ADC-QS server which has to support the New Vips layouts. This cpf must be installed on the PRID (12.09) which converts the exam related film layout.
- Cassette related hardcopy layouts are still supported as long as PRID is used to identify cassettes.
- The full ADC QS application should be started to make th **backup** task work.
- The display setting should be set to TRUE COLOR to make the **gateway** work properly.
- The **Regional Settings Properties** should be checked, that the decimal symbol is a point and the digit grouping symbol is a comma. Other settings cause problems by viewing with IMPAX.
- When **licenses** are gone during normal operation, select the option 'Restore Licenses' in the Startup->Agfa->ADC-QS->Tools menu.
  When new licenses are added or removed after delivery from production, make a backup of the licenses by selecting the option 'Backup Licenses' in the Startup->Agfa->ADC-QS->Tools menu.

- If **backup task** from task manager is executed it may take up to 10 minutes. Time depends on the number of images. The system gives no feedback if backup task is running. You can check the progress at NT Explorer directory J:\BackupCompas; as long as the file size is growing the backup is running.

1.2 Task Manager

General

- Some tasks allow freely editing and deleting of its parameters. If these parameters are removed (by a wrong user operation), it is very hard to find back the correct parameter names. Therefore we recommend **not to edit the task parameters at all**. The default parameters are the tested ones and guarantee a proper working of the system!

If you are faced to a problem where a change of the settings may be necessary please **first contact an expert** (GSC).
If settings are already changed and the system does not run proper, please contact an expert (GSC).

- If status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

- The Configuration Viewer task manager does not update the status of a task when it changes. The only way to verify if a task is still running is in the NT-task scheduler.

- A task only works when server is running. Editing a task while the server is not running gives an error which can not be bypassed. In order to be sure that the server is running reset ADC QS Software, also if a problem occurs reset the ADC QS Software.

QC Phantom task

- The task manager lists QC Phantom task as ACTIVE, but this task is INACTIVE. This task is not implemented and can not be edited.

1.3 Troubleshooting

- **Locked File Problem after upgrade from Web Admin**
  If during an installation you receive the error message 'An error occurred during the data move process - 115', then a program file is currently locked by the system and can't be replaced. To rectify this, stop the following services from the Control Panel::Services applet:
  Spooler
  World Wide Web Publishing Service
  Now retry the installation. It should now work as the program files are in the unlocked state.

- **Permissions Problem:**
  At present, you should have **local machine Administrator** privileges to install ADC-QS. This means you must install under ***Administrator*** account or the ***compas*** account must be a member of Administrators group. The compas account is added to Administrators group during the Server installation.
  Without Administrator privileges may experience the locked files problem described above. Also you won't be able to set up any local printers on the system.

- **Missing Configuration:**
  If for some reason the configuration settings are missing, you can run the ***Restore*** task to recover them (assuming you did back a backup originally). From the configuration viewer – select **Restore** from the list, click <Modify>, ensure field 'OnlyRestoreConfig' is set to 1 (one). Click <OK>. Click now on <Activate> if the task is INACTIVE, then click <Execute>.

  The settings are restored. Click on desktop button 'Reset ADC-QS' to activate the restored settings.

- **Images Not Visible:**
  If for some reason the images are not visible, you can run the ***Restore*** task to recover them (assuming you did back a backup originally). From the configuration viewer – select **Restore** from the list, click <Modify>, ensure field 'OnlyRestoreConfig' is set to 0 (zero). Click <OK>. Click now on <Activate> if the task is INACTIVE, then click <Execute>. The settings and data are restored. Click on desktop button 'Reset ADC-QS' to activate the restored settings.

- **Printing Problems from Client**
  In case of printing problems from client check:
  - Printer has to be installed as a NT network printer on the client station. Print server has to be the ADC QS server.
  - Check `System monitoring`
    `Network`
    `Protocols`
    Here you must find 'TCP/IP-Protocol' and 'NetBEUI Protocol'.

- **Wrong window level values**
  Window level values are wrong if the "Regional Settings Properties" are incorrect. Check that that the `Decimal symbol` is a point
  and the `Digit grouping symbol` is a comma at the tab "Number".

- **"Layout" and "TextBox" Editor at "Tools" menu**
  The "Layout" and "TextBox" Editor are now to find at the "Tools" menu in the main menu bar.

- **Uninstaller setup failed to initialize**
  During installation the message "Uninstaller setup failed to initialize. You may not be able to uninstall this product." pops up. This prevents the "Uninstall" button from being created in the Add/Remove Programs applet and the application normally cannot be uninstalled.
  This occurs because the Uninst.isu file in the install target folder (that is the location where you are installing to) has become corrupt. To remedy this, you need to delete all files in the install target folder, and try again

1 Integrating ADC-QS into an Existing NT Domain

By default the systems delivered by AGFA are set up to operate in an unmanaged 'peer to peer' network pool called 'WORKGROUP'. This name 'WORKGROUP' is the same for all language versions of ADC-QS.

Further to this the ADC-QS Server and Client machines are set up with 2 local machine accounts:

Account	Password
administrator	(empty)
compas	compas98

Both these accounts are members of 'Administrator' group on the local machine. By default ADC-QS runs under the 'compas' account. The advantage of running ADC-QS as part of 'WORKGROUP' is that the administration tasks are much reduced – the downside to this is that there is almost no security in place.

In many hospital environments ADC-QS will be used as part of a secure NT domain. To add new ADC-QS systems to the domain will require assistance from the local NT Domain Administrator (who has the passwords and authority required). Follow the sequence below to add an ADC-QS Server or Client into a domain:

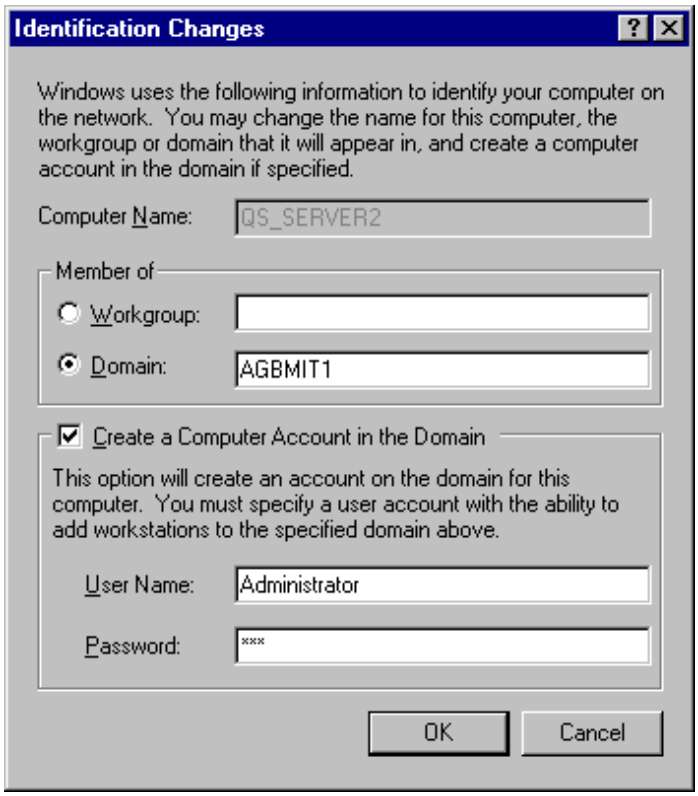
1.1 ADC QS System Name

Change the system name to the new name assigned by the domain administrator – Start Menu::Settings::Control Panel::Network::Identification, click on button 'Change', enter the new name, click <OK> . Click <OK> on confirmation dialog, click <Close> on the network control panel, dialog '… You must shut down and restart your computer… Restart now', click <Yes>. The system restarts.

Changing the computer name results automatically also in a change of the host name (standard NT behavior).
This change of name also has to be written in manually in the cpf-file, otherwise the gateway will not start.

1.2 Add ADC-QS System to Domain

Log back in as local system *Administrator* (blank password). Hold down the shift key to defeat any auto-login. Once logged in, stop any ADC-QS auto-start (Server only). From Start Menu::Settings::Control Panel::Network::Identification, click on button 'Change', click on radio button 'Domain', enter the domain name. Select checkbox 'Create Computer Account in the Domain', enter the **Domain Administrator** name and password. Click <OK>.

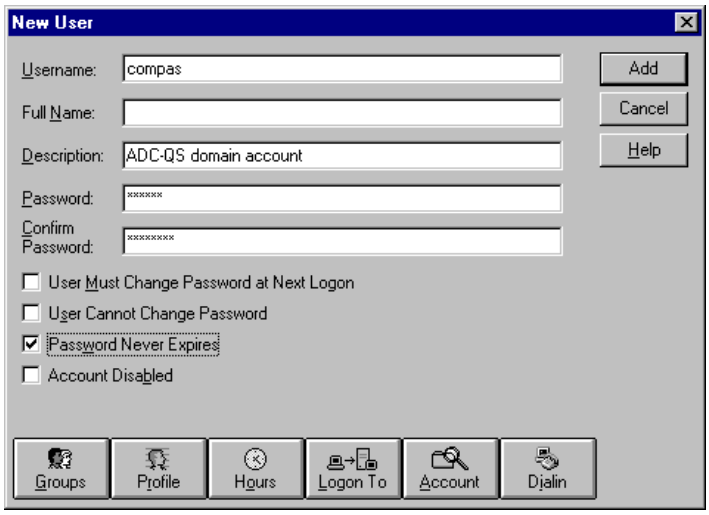

Identification Changes
Windows uses the following information to identify your computer on the network. You may change the name for this computer, the workgroup or domain that it will appear in, and create a computer account in the domain if specified.
Computer Name:
QS_SERVER2
Member of
Workgroup:
Domain:
AGBMIT1
Create a Computer Account in the Domain
This option will create an account on the domain for this computer. You must specify a user account with the ability to add workstations to the specified domain above.
User Name:
Administrator
Password:
***
OK
Cancel

Upon success the message 'Welcome to <Domain Name>' will popup. Click <OK>, then <Close>, dialog '… You must shut down and restart your computer… Restart now', click <Yes>. The system restarts.

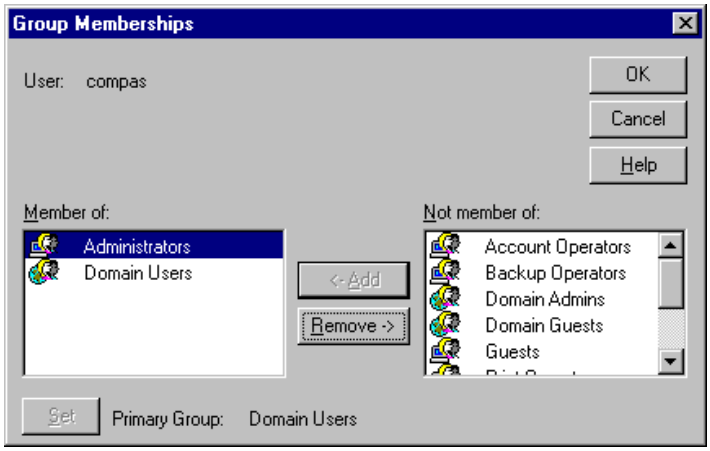
1.3 Add Compas Account to Domain

Note: The compas account only needs to be added one time to the domain. If this step has already been completed, skip ahead now to **1.4**.

Logon as **domain administrator** in the new domain. Select Start Menu::Programs::Administrative Tools (Common)::User Manager for Domains.
Select menu entry 'User::New User' and add the compas details as shown below (the password is ***compas98*** as usual). Note especially the checkbox settings.



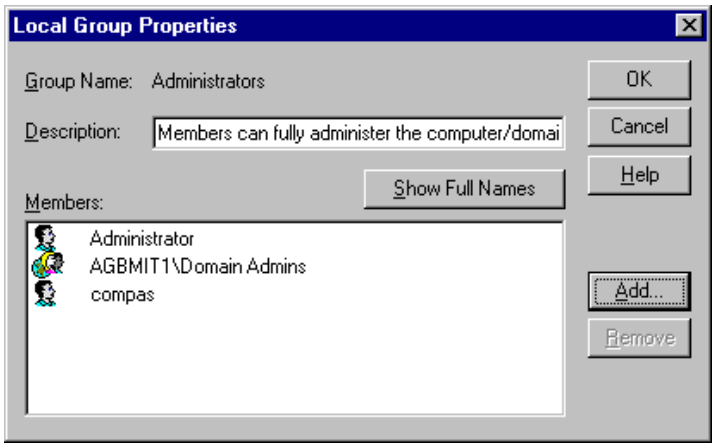
Select now the 'Groups' button. The following dialog is displayed:



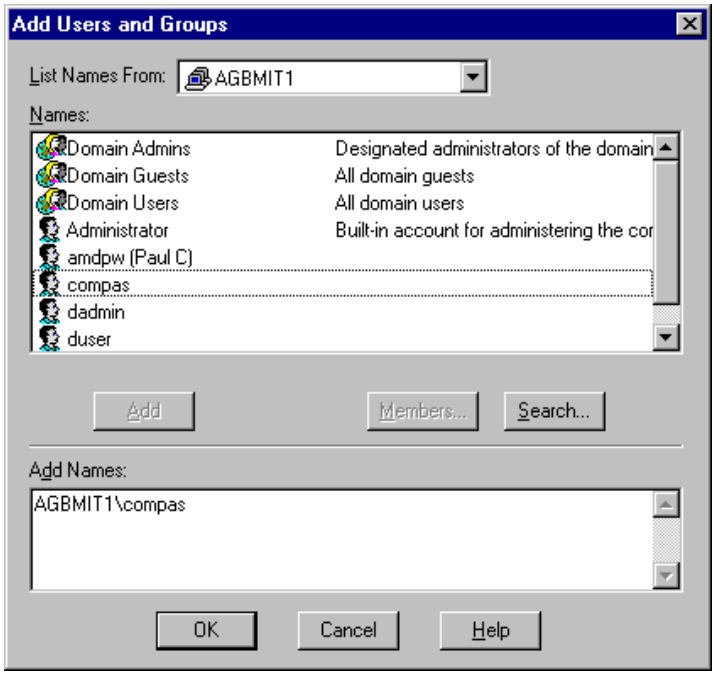
Ensure ***compas*** is member of 'Administrators' and 'Domain Users' (select from the list on the right). Click <OK>., then <OK> again back in the 'New User' dialog. The ***compas*** user then shows up in the 'Username' list. Close the User Manager (Alt-F4, or menu User::Exit). Log off now as **domain administrator** (Start Menu::Shut Down::Close all programs and log on as a different user).

1.4 Adding Domain User to Local System

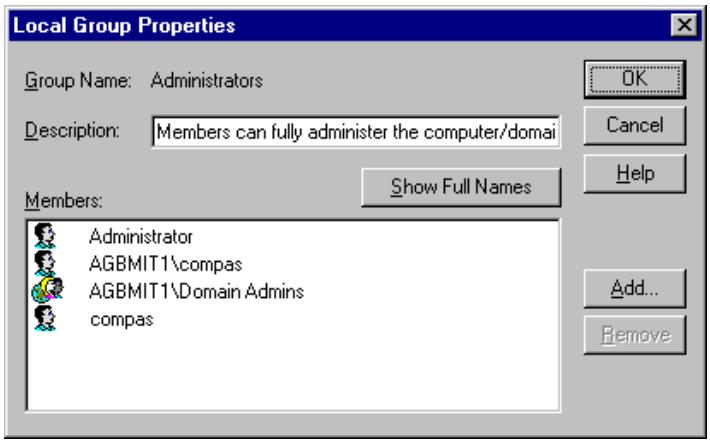
Log back in as local system *Administrator* (**not domain logon !**). Start again the 'User Manager for Domains', double click on 'Groups->Administrators' in the list at the bottom half of the screen.



Click now on 'Add', select ***compas*** from the Names list of the domain, click on <Add>, the domain compas account is added to the Add Names list:



Click then on <OK> to close this dialog. The ***domain name**compas*** account will show up in the Local Group Properties::Members list:



Click then on <OK> to close this dialog. Close the User Manager (Alt-F4, or menu User::Exit).

1.5 Logging onto the Domain

Log-off from the local system ('Start Menu::Shut down::Close all programs and log-on as different user') ,then re-logon **using the domain account** as shown below:

Once logged in, ADC-QS is now available for use.

Notes:

a) The auto-login and auto-shutdown feature of ADC-QS Server is still working under domain log-in. To bypass the auto-login, hold down the *Shift* key during the login phase.

b) The domain administrator will normally carry out sections **1.3** and **1.4** for you. In this way you do not have to make a request for the domain administrator account and passwords.

c) Procedures for setting up printers and other devices from the ADC-QS Server remain the same under domain login.

Order-No.: DD+DIS277.01E

1 Piece UTMOY MA1

ADC QS 2.0.xx
Type 4406 / 421

Software Installation Instructions for ADC QS 2.0.09

Upgrade from ADC QS 1.0.01 / 1.0.05 / 1.0.06 to ADC QS 2.0.09

This modification instruction is also enclosed to the modification kit EB+44060007.

Necessary time:

Approximately 45 minutes for Server Station

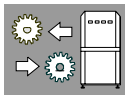
Approximately 45 minutes for Client Station

If you have already Software Version ADC QS 2.0.08 installed, do not carry out this procedure.

For upgrading from ADC QS 2.0.08 to ADC QS 2.0.09 use the patch "patch209.exe" available on DigiNet / MedNet.

printed in Germany 01 / 2002

AGFA



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1 General Information

Before starting the software installation read the appended Tips & Tricks.

1.1 Important Remarks

AGFA cannot guarantuee for proper working of the ADC QS Software if any other 3rd party software is running on the same computer.

If there is another Software (e.g. virus checking software) than the ADC QS Software components on the system, make sure that no other application is running during upgrade, installation or configuration of the ADC QS System!

1.2 Preparing the Upgrade to ADC QS 2.0.09

Adaptation of WIN NT Operating System to the local language

If you want to adapt the WIN NT Operating System language to the local language, you first have to apply the “Language Update Version 1.03” or higher. Please note, this is not a part of this package but is included in the upgrade kit “ADC_QS Upgrade 1.0.01 to 1.0.06” (Order Number: EB+44060723).

1.3 What is new in ADC QS 2.0.08 / ADC QS 2.0.09?

- The reliability of the system increased considerably
- Up to three clients can be connected to one server
- Local languages available (English, French, Dutch, Spanish, German, Portuguese, Swedish)
- New supported printers (see appendix)
- Quick print stability is increased

1.4 Changes from ADC QS 2.0.08 to ADC QS 2.0.09

- The problem that patient position is not derived correctly if the SUB EXAM name contains the view position, e.g. AP, PA, LAT, is solved.

1.5 Software Prerequisites

ADC Compact Digitizer:	≥ COP_1215,
ADC Solo Digitizer:	≥ SOL_1108,
PRID (Preview & Identification SW):	≥ PRID1.2.09

1.6 Scope of Delivery Software Kit ADC QS 2.0.09

(Order Number EB+44060007)
1 x ADC QS 2.0.09 Application CD
1 x ADC Service Pack 6.0 with Security Update CD version 1.05
1 x ADC Restore Toolkit 2.4 CD
1 x ADC QS PRINTER_PPD floppy disk
1 x ADC QS 2.0.09 Upgrade Documentation (DD+DIS275.01E)
3 x CD blank, 74 min. with label

1.7 Required Time for the Upgrade

- approx. 45 min. for the Server Station
- approx. 45 min. for the Client Station

2 Upgrade Procedure for ADC QS Server Station

2.1.1 Preparations

2.1.2 Toolbar Configuration

(1) Note down your toolbar configurations. They will be lost after the upgrade procedure

2.1.3 Empty Printer Queues

(2) Check that the printer queues of all your printers in the NT print spooler are empty.

(3) In case you have the printer AGFA Drystar SI100 and/or AGFA Drystar SI400 installed as PS printers, delete these printers!

2.1.4 Create site specific backup

(4) Start ADC QS Server Station and click <OK> to login

Make sure the ADC QS application is running.

(5) Make a backup
Select in the Start menu
AGFA
ADC QS
Configuration

(6) Stop the Gateway

(7) Select Monitoring
Task Management
Backup

(8) Click on <Modify>

Before making the backup, check the correct path of the backup directory and change, if necessary: **J:\BackupCompas**

If you had to change the directory, reboot ADC QS application and repeat steps (4) to (7).

(9) Click <Execute> to make a backup
This lasts about 10 min. (depends on the number of data)

Do not interrupt the backup! You can check the progress at the NT Explorer directory J:\BackupCompas by a growing file size.

In the ADC QS Task Manager the status of the backup task is not refreshed automatically. To refresh the status leave Task Manager and start it again.

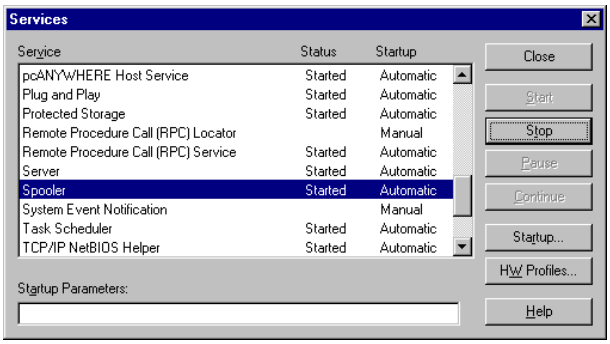
ADC QS
Server

(10) Stop ADC QS

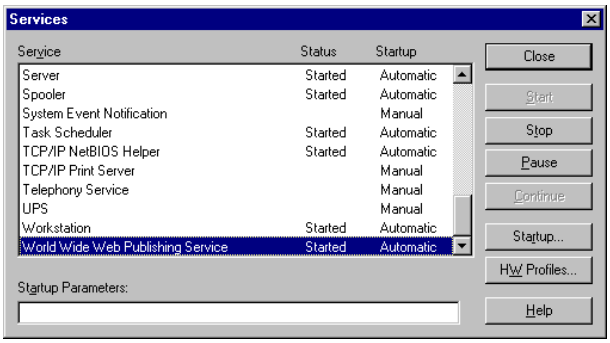
2.1.5 Stop “Spooler” and “World Wide Web Publishing” Services

(11) Stop NT-Service “Spooler”:

Select
`Control Panel`
`Services`
`Spooler`
and click `<Stop>`.



(12) Stop NT-Service “World Wide Web Publishing Service”:
Select
`Control Panel`
`Services`
`World Wide Web Publishing Service`
and click `<Stop>`.



2.1.6 Creating Restore CD of current Installation

See point 2.4.5 Creating the Restore CD

ADC QS

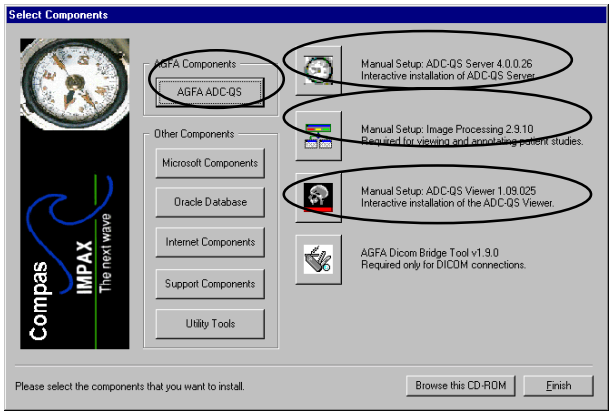
Server

2.2 Installation of Application

2.2.1 Installation of ADC QS Server Components

(1) Insert CD ROM with ADC QS Application Software

(2) Autostart starts the `Install Launcher`



(3) Select in `AGFA Components: <AGFA ADC QS>`

(4) Select
`<Manual Setup ADC QS Server>`

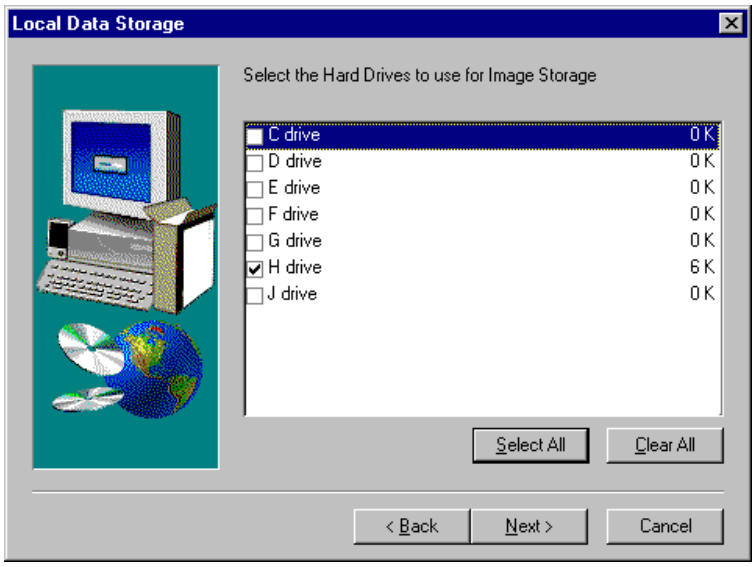
(5) Please read the `Software License Agreement` and click `<Yes>`, if you agree.

(6) Select the default path of `E:\Agfa\CompasServer` and click `<Next>`.

(7) Select the default path for `Server(Complete)` and click `<Next>`.

(8) Select the default folder `Agfa\ADC-QS` and click `<Next>`.

(9) Accept defaults (`H Drive`), or select to match required disk layout and click `<Next>`.



ADC QS

Server

If additional hard disks are installed, it might be necessary to change the drive letter. Do always assign the drive letter of the image disk.

(10) Review information and click <Next> to accept, or <Back> to change any setting.
Copying starts, at end dialog Setup Complete appears.

(11) If you are asked to restart the computer, select No, I will restart later

(12) Click <Finish>.
The Install Launcher window appears again

2.2.2 Installation of ADC QS Image Processing Components

(13) Select in AGFA Components: <AGFA ADC QS>

(14) Select
<Manual Setup Image Processing>

(15) Click <Next> on Welcome window

(16) Select default <Customer Installation> and click <Next>

(17) Check that E:\Agfa\Improc\ApnCre is set, using the <Browse> button and click <Next>

(18) If the popup The folder.... does not exist. Do you want it created? appears, click <Yes>.
Files are copied, then the Dialog Setup Complete appears

(19) Click <Finish>.
The Install Launcher window appears again

2.2.3 Installation of ADC QS Viewer Component

(20) Select in AGFA Components: <AGFA ADC QS>

(21) Select
<Manual Setup ADC QS Viewer>

(22) Click <Next> on Welcome window

(23) Please read the Software License Agreement and click <Yes>, if you agree

(24) Select default Typical and click <Next>

(25) Select the default path of E:\Agfa\ADC-QS\Viewer and click <Next>

(26) Select the default folder Agfa\ADC-QS and click <Next>

(27) Review information and click <Next> to accept, or <Back> to change any setting.
Files are copied

(28) Click <Finish> to complete Setup
The Install Launcher window appears

ADC QS

Server

(29) Click <Finish> and reboot system at end

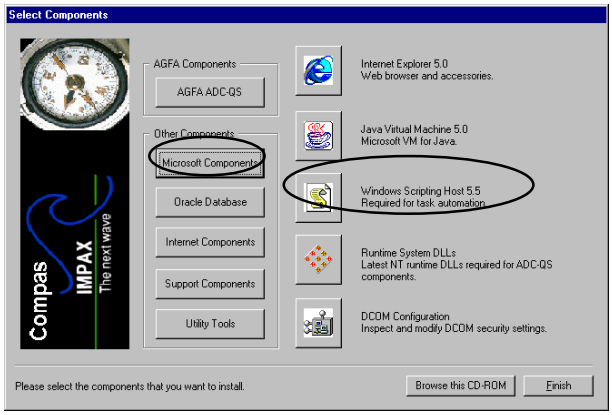
2.2.4 Updating Windows Scripting Host to version 5.5

(30) Stop ADC QS application

(31) Start up `Install Launcher` again (either by ejecting and re-inserting the CD or selecting setup.exe from the root directory)

(32) Select `Microsoft Components`

(33) Select Windows Scripting Host 5.5



(34) Click <Yes> in `Windows Script Version 5.5` window

(35) Click <Yes> on License Agreement

Files are copied.

(36) Confirm window `Windows Script Version 5.5`

(37) On question `Restart Computer` click `<No>`

(38) Finish the `Install Launcher` and eject ADC QS application CD

2.3 Additional NT Operating System Upgrades

2.3.1 Activating Posting Acceptor 1.01

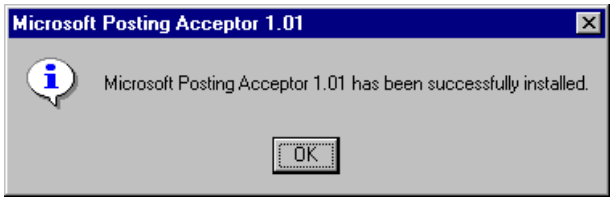
(39) Locate in NT Explorer the file `pak210-x86.exe` (filename may be abbreviated `pak210~1.exe`) in folder `C:\winnt\system32\setup`

(40) Execute `pak210-x86.exe`

(41) Dialog `MS Posting Acceptor 1.01` appears

Confirm License Agreement with `<Yes>`

(42)



Confirm window `Microsoft Posting Acceptor 1.01` with `<OK>`

ADC QS

Server

(43)

Microsoft Posting Acceptor 1.01
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Click <No> on question Restart the computer.

2.3.2 Service Pack 6a Installation

(44) Insert “Security Update CD version 1.05” (or higher)

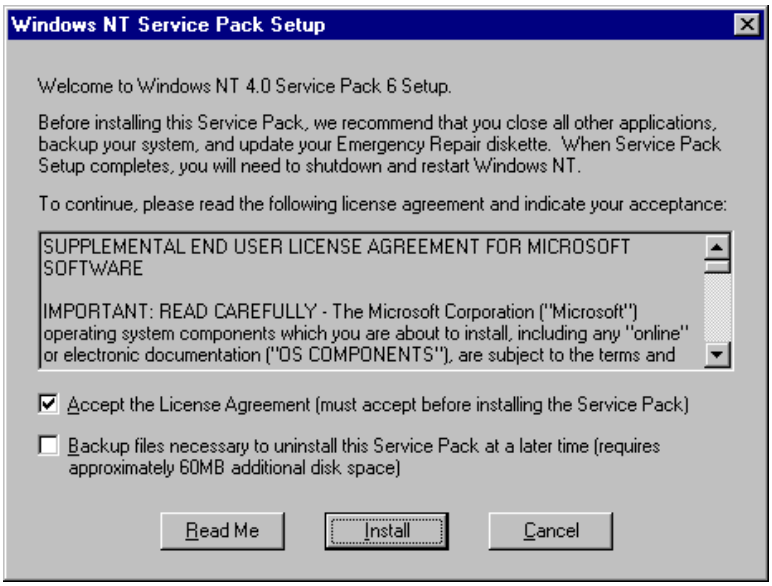
(45) Stop ADC-QS. Disconnect the network cable from the server PC.

(46) Locate via NT Explorer the file 'sp6i386.exe' on the Security Update CD. As the service Pack is language dependant you have to select the file from the language folder your NT OS is installed with.

(47) Execute file 'sp6i386.exe' by double-clicking

Files are extracted.

(48) Window Windows NT Service Pack Setup appears.
Check Accept License Agreement...,
Uncheck Backup files necessary to uninstall..., click on <Install>.


Windows NT Service Pack Setup
Welcome to Windows NT 4.0 Service Pack 6 Setup.
Before installing this Service Pack, we recommend that you close all other applications, backup your system, and update your Emergency Repair diskette. When Service Pack Setup completes, you will need to shutdown and restart Windows NT.
To continue, please read the following license agreement and indicate your acceptance:
SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE
IMPORTANT: READ CAREFULLY - The Microsoft Corporation ("Microsoft") operating system components which you are about to install, including any "online" or electronic documentation ("OS COMPONENTS"), are subject to the terms and
Accept the License Agreement (must accept before installing the Service Pack)
Backup files necessary to uninstall this Service Pack at a later time (requires approximately 60MB additional disk space)
Read Me
Install
Cancel

(49) Files are copied. At end click button to restart the system.

ADC QS

Server

2.3.3 Security Update with “Security Rollup” Package

(50) Stop the ADC-QS application and disconnect the Network cable.

(51) Insert “Security rollup toolkit CD version 1.05” (or higher), if not done already

(52) Locate via NT Explorer the file `'CodeRedCleanup.exe'` on the Security Update CD.

(53) Copy it to the `c:\temp` folder

(54) Execute the file `c:\temp\CodeRedCleanup.exe` from a DOS command prompt.

(55) Locate in NT Explorer the Security Rollup Package (SRP) `'q299444.exe'`. The SRP is located in the relevant language folder of the ADC-QS Security Update CD (as xxxq299444.exe, where xxx is the language name prefix).

(56) Execute the SRP, then restart the system as suggested. The SRP will prevent the worm from re-infecting the system.

(57) Reconnect the network cable to the system and remove “Security rollup toolkit CD” from CD-ROM drive.

2.4 Finishing the Installation

2.4.1 Check Printer Properties

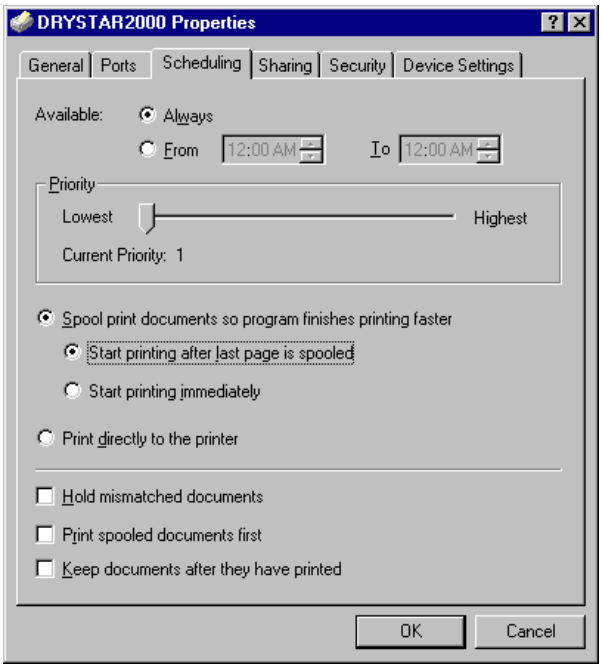
Check the following settings for every installed printer:

(1) Select
`Start`
`  Settings`
`    Printers`

(2) Move the mouse cursor to a printer and click right mouse button

(3) Select
`Properties`
`  Scheduling`

(4) Set “Start printing after last page is spooled”



(5) Click `<OK>`

2.4.2 Set Regional Settings Properties (Activating Local Language for Application)

(6) Check and change local language if necessary.

(7) Select
`Control Panel`
`  Regional Settings Properties`
`    tab Regional Settings`

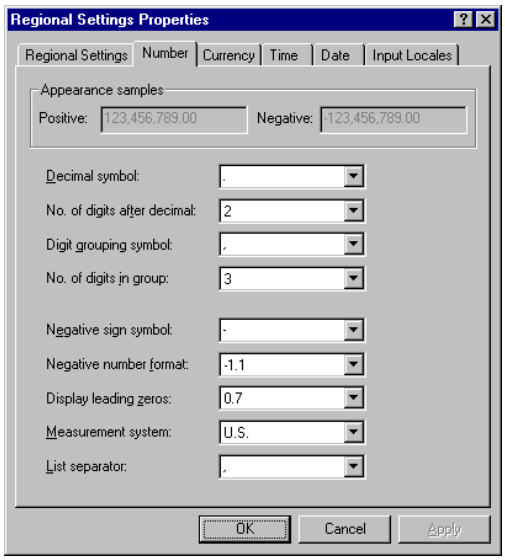
Possible languages are: English, French, Dutch, Spanish, German, Portuguese, Swedish

ADC QS

Server

(8) Select
`Control Panel`
`Regional Settings Properties`
tab `Number`

(9) Check that the `<Decimal symbol>` is a point and the `<Digit grouping symbol>` is a comma.



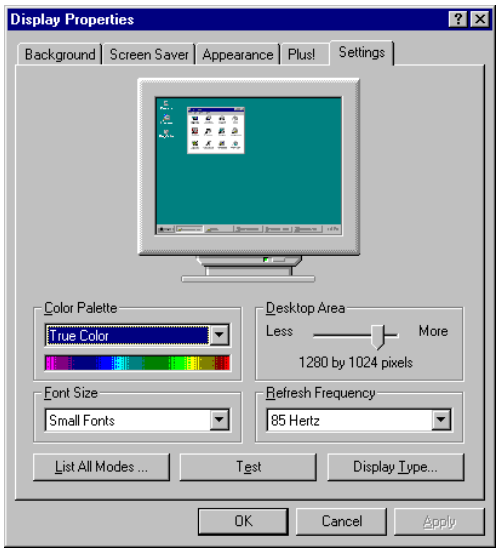
2.4.3 Check Display Settings

(10) Select
`Start`
`Settings`
`Control Panel`

(11) Select
`Display`
`Settings`

(12) Select tab `Settings`

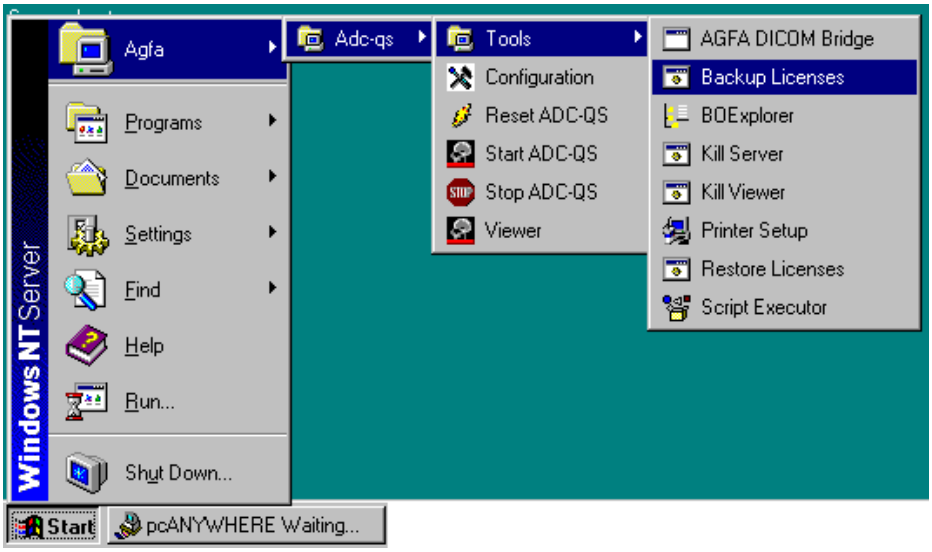
(13) Set color palette to `True Color`



2.4.4 Backup licenses of ADC QS Server

(14) Select

```
Start
 Agfa
  Adcqs
   Tools
    Backup Licenses
```



A backup is created.

2.4.5 Creating the Restore CD

2.4.5.1 General

To create on site a bootable Restore CD-ROM makes it possible to restore the server system at a later date back to the same identical state as it was by creation of the CD. Please pay attention to the following points:

- The CD must only be used on the PC where it was created!
- A Restore CD covers only an image of the first hard disk (partition C, E and F), the second hard disk is not saved.
- It is not possible at the moment to create a Restore CD for the Client Station.
- During the process the CD tray can open and close automatically; this is then part of the procedure.

2.4.5.2 Requirements

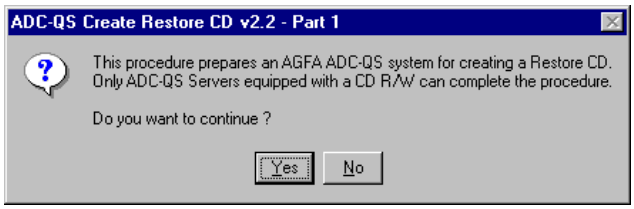
- CD-ROM ADC-QS Restore Toolkit CD
- Blank or rewriteable CD

2.4.5.3 Procedure

(15) Insert the ADC QS Restore Toolkit CD in the CD-ROM drive.

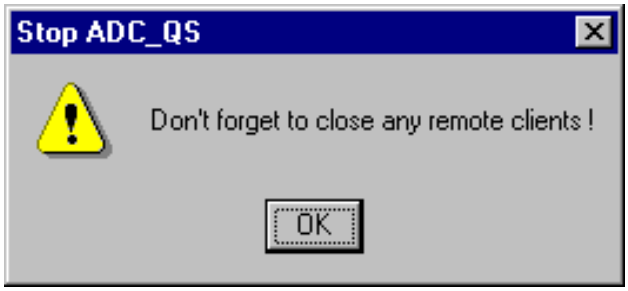
The CD starts automatically. If it does not start automatically, open file <Make_cd.bat> of the CD.

(16) <Create Restore CD> window appears.


ADC-QS Create Restore CD v2.2 - Part 1
This procedure prepares an AGFA ADC-QS system for creating a Restore CD.
Only ADC-QS Servers equipped with a CD R/W can complete the procedure.
Do you want to continue ?
Yes
No

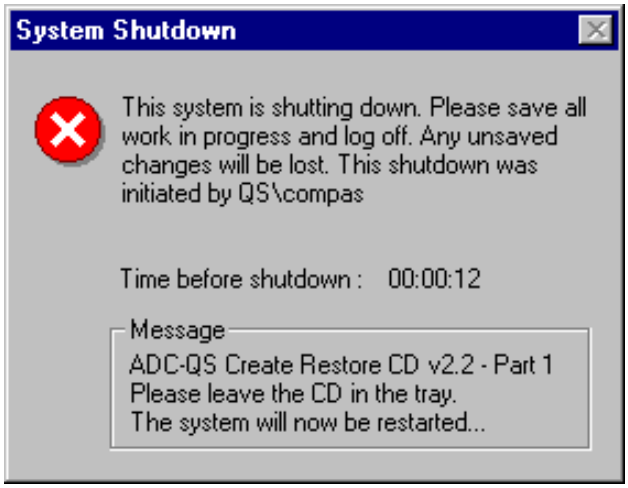
Click <Yes>

(17) Warning to close any existing ADC QS sessions appears.

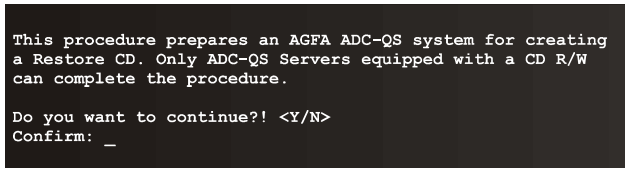


Click <OK>

(18) System shuts down.


System Shutdown
This system is shutting down. Please save all work in progress and log off. Any unsaved changes will be lost. This shutdown was initiated by QS\compas
Time before shutdown : 00:00:12
Message
ADC-QS Create Restore CD v2.2 - Part 1
Please leave the CD in the tray.
The system will now be restarted...

(19) Wait until DOS window appears


This procedure prepares an AGFA ADC-QS system for creating a Restore CD. Only ADC-QS Servers equipped with a CD R/W can complete the procedure.
Do you want to continue?! <Y/N>
Confirm: _

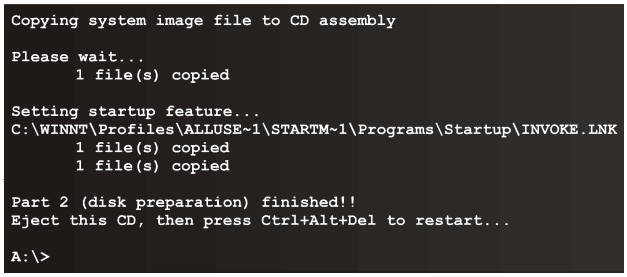
ADC QS

Server

Type in <Y> or wait until it is inserted automatically after a few seconds (Y corresponds to an American keyboard !)

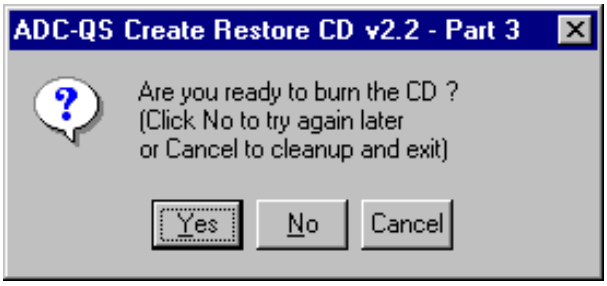
(20) Symantec Ghost program starts automatically and creates a system image of hard disk 1

(21) Wait until DOS window appears



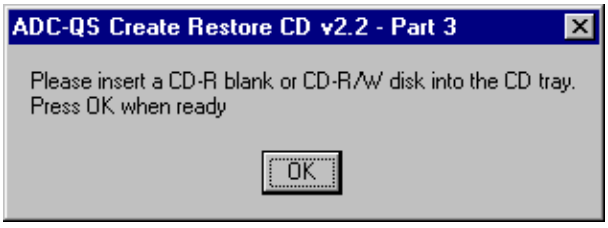
Eject the ADC QS Restore Toolkit CD and press <Ctrl+Alt+Del> to restart the system

(22) Wait until the scanning for CD Writer is finished and the selection window appears


ADC-QS Create Restore CD v2.2 - Part 3
Are you ready to burn the CD ?
(Click No to try again later
or Cancel to cleanup and exit)
Yes
No
Cancel

Click <Yes>

(23) Insert CD-R window appears.



Insert blank CD and click <OK>

(24) Various windows show progress.

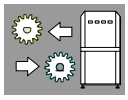
(25) Eject the recorded CD and write

- "ADC-QS Server Restore CD"
- Date of creation
- Software version
- Creator of the CD

on it.

ADC QS

Server



2.4.5.4 Testing the recorded Restore CD

(26) Insert the Restore CD and restart the system

(27) DOS selection window appears

```
+-----------------------------------------------+
!      AGFA ADC-QS Restore Server Utility       !
+-----------------------------------------------+


Press <1> to restore ADC-QS Server Disk1.
Press <2> to restore ADC-QS Server Disk2.

or <q> to quit (no action).

Select: _
```

Type in <q>
(For testing it is not necessary to carry out a restore procedure)

If the window does not appear, first check the boot sequence in the BIOS before creating a new Restore CD.

3 Upgrade Procedure for ADC QS Client Station

Make sure that the ADC QS application on the server is running.

If it is not running the installation will not succeed!

3.1 Preparations

3.1.1 Toolbar Configuration

(1) Note down your toolbar configurations. They will be lost after the upgrade procedure

3.1.2 Empty Printer Queues

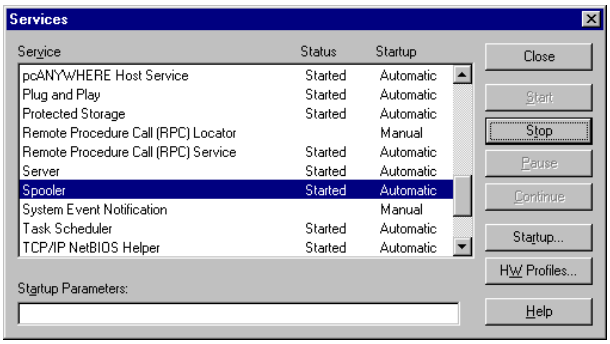
(2) Check that the printer queues of all your printers in the NT print spooler are empty.

(3) In case you have the printer AGFA Drystar SI100 and/or AGFA Drystar SI400 installed as PS printers, delete these printers!

3.1.3 Stop “Spooler” Services

(4) Stop NT-Service “Spooler”:

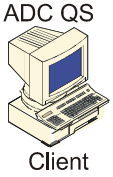
Select
`Control Panel`
`Services`
`Spooler`
and click `<Stop>`.



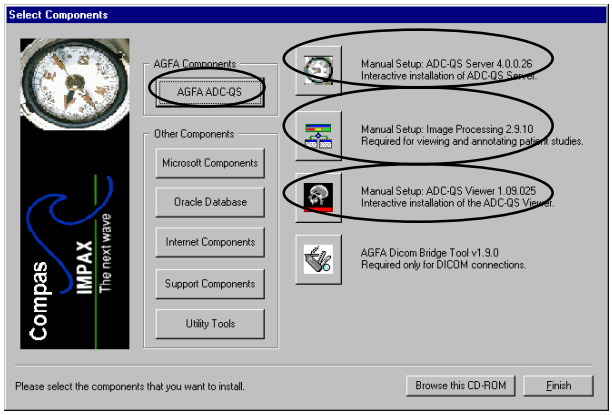
3.2 Installation of Application

(5) Stop ADC QS on the Client Station

(6) Insert CD-ROM with ADC QS Application Software.



(7) Autostart starts `setup.exe` on CD-ROM.
The `Install Launcher` starts



3.2.1 Installation of ADC QS Server Components

(8) Select in `AGFA Components: <AGFA ADC QS>`

(9) Please read the `Software License Agreement` and click `<Yes>`, if you agree

(10) Select `<Manual Setup ADC QS Server>`

(11) Select the default path of `E:\Agfa\CompasServer` and click `<Next>`

(12) Select `<Client>`

(13) Select the default folder `<Agfa\ADC-QS>` *and* click `<Next>`

(14) Enter the IP-address of the server and click `<Next>`
Check if IP-address of ADC QS server is correct.

(15) Review information and click `<Next>` to accept, or `<Back>` to change any setting.
Files are copied.

(16) Click `<Finish>` to complete Setup.
The `Install Launcher` window appears.

3.2.2 Installation of ADC QS Image Processing Components

(17) Select in `AGFA Components: <AGFA ADC QS>`

(18) Select `<Manual Setup Image Processing>` and click `<Next>`

(19) Select default `<Customer Installation>` and click `<Next>`

(20) Select `E:\Agfa\Improc\ApnCre` using the `<Browse>` button, and click `<Next>`

(21) If the popup `The folder.... does not exist. Do you want it created?` appears, click `<Yes>` and `<Next>`.
Files are copied, then the Dialog `Setup Complete` appears

ADC QS

Client

(22) Click `<Finish>`
The `Install Launcher` window appears.

3.2.3 Installation of ADC QS Viewer Components

(23) Select in `AGFA Components: <AGFA ADC QS>`

(24) Select `Manual Setup ADC QS Viewer and` click `<Next>`

(25) Please read the `'Software License Agreement'` and click `<Yes>`, if you agree

(26) Select default `'Typical'` and click `<Next>`

(27) Select the default path of `E:\Agfa\ADC-QS\Viewer` and click `<Next>`

(28) Accept default `Agfa\ADC-QS`, click `<Next>`

(29) Review information and click `<Next>` to accept or `<Back>` to change any setting.
Files are copied.

(30) Click `<Finish>` to complete Setup

(31) Click `<Finish>` again and reboot system at end

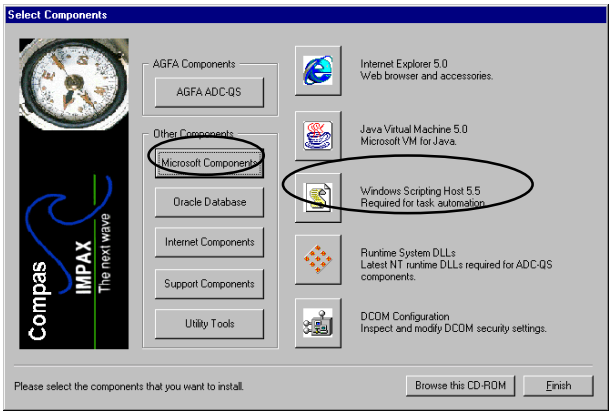
3.2.4 Updating Windows Scripting Host to version 5.5

(28) Stop ADC QS application

(29) Start up `Install Launcher` again (either by ejecting and re-inserting the CD or selecting setup.exe from the root directory)

(30) Select `Microsoft Components`

(31) Select Windows Scripting Host 5.5



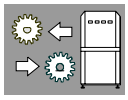
(32) Click <Yes> in `Windows Script Version 5.5` window

(33) Click <Yes> on License Agreement

Files are copied.

ADC QS

Client



3.3 Additional NT Operating System Upgrade

3.3.1 Service Pack 6a Installation

(34) Insert “Security Update CD version 1.05” (or higher)

(32) Stop ADC-QS. Disconnect the network cable from the client PC.

(33) Locate via NT Explorer the file `'sp6i386.exe'` on the Security Update CD. As the service Pack is language dependant you have to select the file from the language folder your NT OS is installed with.

(34) Execute file `'sp6i386.exe' by double-clicking`

Files are extracted.

(35) Window `Windows NT Service Pack Setup` appears.
Check `Accept License Agreement...`,
Uncheck `Backup files necessary to uninstall...`, click on `<Install>`.

(36) Files are copied. At end click button to restart the system.

3.3.2 Security Update with “Security Roll-up” Package

(37) Stop the ADC-QS application

(38) Insert “Security Update CD version 1.05” (or higher), if not done already

(39) Locate via NT Explorer the file `'CodeRedCleaner.exe'` on the Security Update CD.

(40) Copy it to the `c:\temp` folder

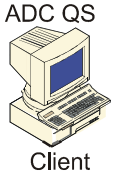
(41) Execute the file `c:\temp\CodeRedCleaner.exe` from a DOS command prompt.

Note that the execution of this step in Client results in an error since one of the components being cleaned does not exist. The error message can be ignored.

(42) Locate in NT Explorer the Security Rollup Package (SRP) `'q299444.exe'`. The SRP is located in the relevant language folder of the ADC-QS Security Update CD (as xxxq299444.exe, where xxx is the language name prefix).

(43) Execute the SRP, then restart the system as suggested. The SRP will prevent the worm from re-infecting the system.

(44) Reconnect the network cable to the system and remove “Security Update CD” from CD-ROM drive



3.4 Finishing the Installation

3.4.1 Set Regional Settings Properties (Activating Local Language for Application)

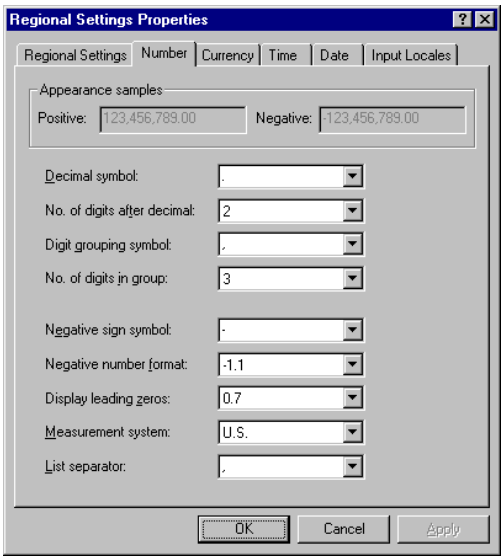
(1) Check and change local language if necessary.

(2) Select
`Control Panel`
`Regional Settings Properties`
tab `Regional Settings`

Possible languages are: English, French, Dutch, Spanish, German, Portuguese, Swedish

(3) Select
`Control Panel`
`Regional Settings Properties`
tab `Number`

(4) Check that the `<Decimal symbol>` is a point and the `<Digit grouping symbol>` is a comma.



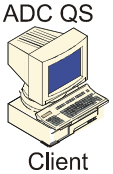
3.4.2 Check Display Settings

(5) Select
`Start`
`Settings`
`Control Panel`

(6) Select
`Display`
`Settings`

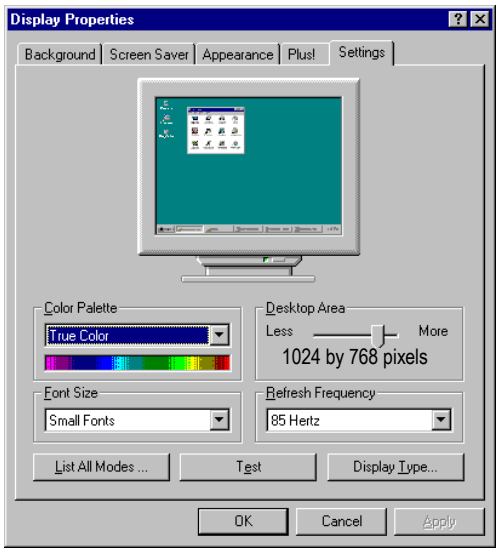
(7) Select tab `Settings`

ADC QS



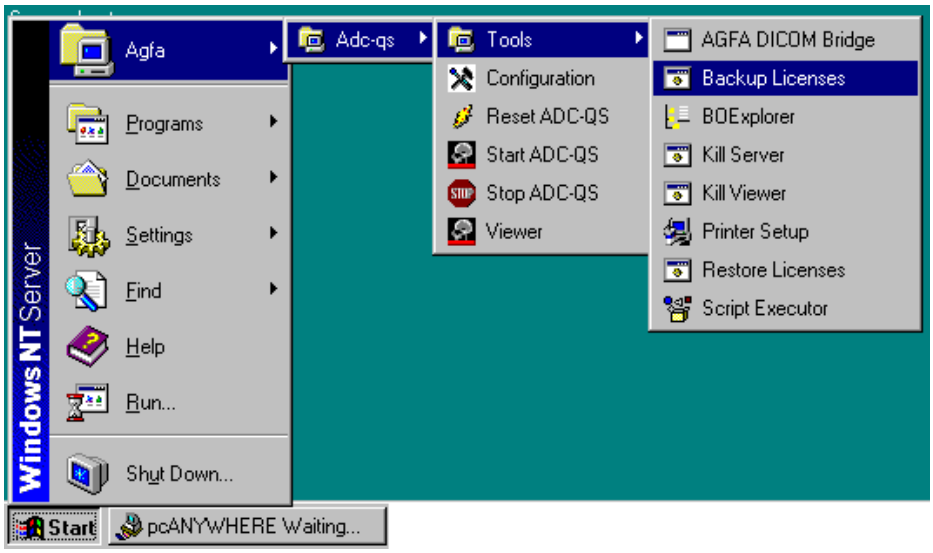
Client

(8) Set color palette to `True Color`

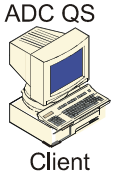


3.4.3 Backup licenses of ADC QS Client

(9) Select
`Start`
`Agfa`
`Adcqs`
`Tools`
`Backup Licenses`



A backup is created.



4 Changes from ADC QS 2.0.08 to ADC QS 2.0.09

The following problem is solved:

If the SUB EXAM name contains the view position, e.g. AP, PA, LAT; this patient position is not derived correctly.

As a result, the system does not use the Image Processing parameters as configured in the cpf-file, but a default setting that puts Edge Contrast, Latitude Reduction and Noise Reduction to 0 and MUSI Contrast to 5.

5 Open Issues (ADC QS 2.0.09)

Birth date field is empty
When birth date field is not entered in PRID then the field remains empty in ADC QS (no default date is put in).

Study info in selector only shows info about first image of study
When the user selects a record in the list view pane and goes to study info via the tools menu, only the info about the first image is visible. It is not possible to access the info for the other images.

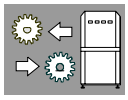
Print Composer printing
When printing from Print Composer no “Done” status for printing is shown in List View Pane.

Tasks interrupting by “Deactivate” button may hang up tasks
When status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

ACCESS_VIOLATION error
If an image is deleted on one of the QC viewers the thumbnail of a deleted image remains and an ACCESS_VIOLATION error occurs. To get rid of this thumbnail refresh by using the “F5” key or closing ADC QC viewer and opening again.

Textbox field is not updated automatically
If the default Print Textbox is used, it does not show examination name on the hardcopy. In the default textbox the correct field `ICRProcedureStepDescription` has been changed to `IProcedureDescription`, which is an empty field in the BOExplorer. The consequence is that instead of the correct data there is now an empty space when you apply the default Print Textbox. Workaround: If the default Print Textbox is used, the field `IProcedureDescription` must be changed manually to `ICRProcedureStepDescription`.

Windows application not able to close while ADC QS is running
When ADC QS is running on a server and you open a window application e.g. the control panel to change date / time, you can not close the application anymore. It stays open as long as the ADC QS is running. By stopping the ADC QS the application is also closed and the changed settings are stored.



Task manager shows QC Phantom task to be ACTIVE
The QC Phantom task can be ignored. It is not available in ADC QS 2.0.08.

Refreshing task manager status
Changed status of the task manager screen is not refreshed automatically. Workaround: To see the actual status, leave the task manager and open it again.

Basic QC viewer sometimes not auto refreshed
Basic QC viewer is sometimes not refreshed automatically. Workaround: Use “F5” key to refresh screen.

Text field entries are reset to default
Demographic data to be displayed under images and thumbnails are reset to default after leaving the application.

Slightly slow display on Client
Display of images and other actions are slightly slower on ADC QS Client PC than on Server.

Difficult identification of print jobs in NT Spooler queue
In the NT Print Spooler it is difficult to identify a print job. If the print job is created by “autoprinting” the patient name is used as print job name; if it is created by interactive printing (Quick Print, Print Composer) only the layout number is visible.

Exporting of GUI
Part of the Graphical User Interface (GUI) cannot be copied and exported to other servers and clients (e.g. toolbar configuration).

Toolbar configuration
Toolbar configuration is lost after the upgrade procedure. The toolbar configuration is not stored per user.

Magnification value on hardcopy
“Magnification value” should not be used, because the value is incorrect. It is not possible to show the correct scaling factor of an image on a hardcopy at the moment.

Burn function
Inversion from black to white does not work proper all the time. Lost energy regions are indicated as black, not black and white (white is inverted, black is not inverted).

Cut off ruler on hardcopy
It is possible to print a ruler on a hardcopy, but if it is printed in true size and this size is larger than the printable area, the ruler will be cut off.

Correction of demographic data
It is not possible to correct demographic data in Basic QC viewer.

Image quality bad
Image quality after transmitting a manually window leveled image to Impax can be bad on Impax version 3.5 in some cases.

Transmission to Impax fail
Manual transmission to Impax fails if started from the dialog box that states that a transmission is ongoing. The status of the transmission is not set to "done" so the user can see that it was not successful and retry.

Film media type can not be changed
The film media type is always blue base, in case a change is needed contact GSC.

Images of one studies are put into two different folders
This problem may occur in the following occasions:

- A study of two or more images is created on PRID. There is a delay of the entering the cassettes in the digitizer which is greater than the IN_PROGRESS timeout.
- A study with more than two images on the PRID is created. The first image arrives at the QC viewer and it is rejected by the user. The second images which arrives on the QC viewer is then put into a different folder then the first one. The third and all later images coming in are again put into the first folder, but never appear on QC viewer! You have to change to IPD to view all of the images.

1 Adding Medical Printers to ADC QS Server Station

1.1 Installing ppd-files from floppy

(1) Insert the floppy disk “ADC QS PRINTER_PPD”

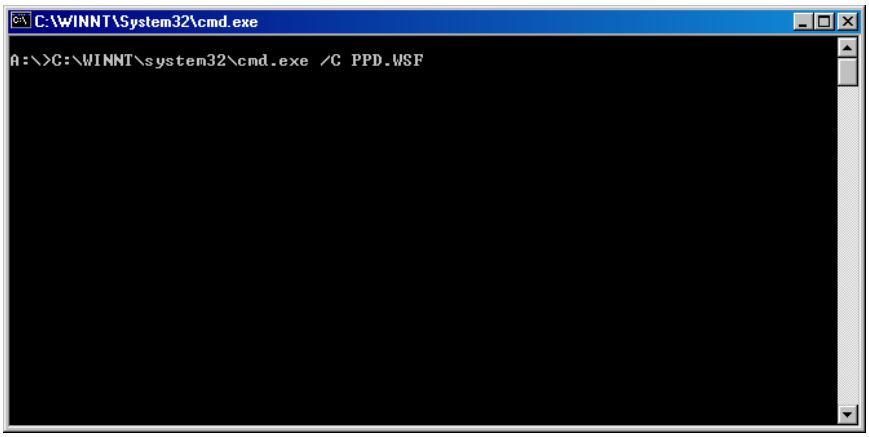
(2) Select

`<Start>`

`<Run>`

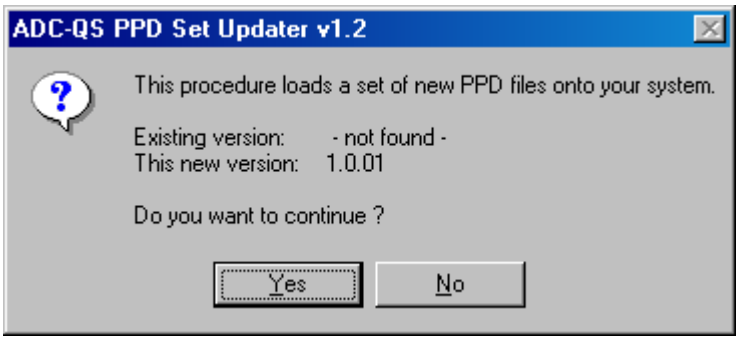
Type: `a:\setup.bat`

DOS windows opens:



No action required.

(3) The ADC QS PPD Set Updater window appears :


ADC-QS PPD Set Updater v1.2
This procedure loads a set of new PPD files onto your system.
Existing version: - not found -
This new version: 1.0.01
Do you want to continue ?
Yes
No

Note :
If there was a version installed before, you will see the version number displayed at “Existing version:”.

Click `<Yes>` to continue.

(4) System is checking for administrator rights.
No action required.

(5) If ADC QS application is running, it will be closed.
No action required.

(6) New PPD files will be copied from the floppy to the system
No action required.

(7) At the end, the application is starting up again if it was running before. When it was not running when starting the installation of the ppd-files, it is not starting up.

(8) ADC QS PPD Set Updater window appears :

Click <OK> to confirm

Note :

The amount of files transferred depends on how many ppd files are copied over from the floppy to the system. This will grow when more printers (more ppd files) are added to the floppy.

1.2 Adding printer to ADC QS

Note that any new printer has to be added to the CPF-file via CCM tool before you start the following procedure

Stop the application and start Configuration Viewer only

(9) Select

`<Start>`
`<Agfa>`
`<Adcqs>`
`<Configuration>`

(10) The `Configuration Viewer` login appears.

Press `<OK>` to login

(no user name or password required)

The `Configuration Viewer` starts up.

(11) Insert the floppy disk with the cpf-file *adc.cpf*

(12) Select

`<File>`
`<Import CPF ...>`

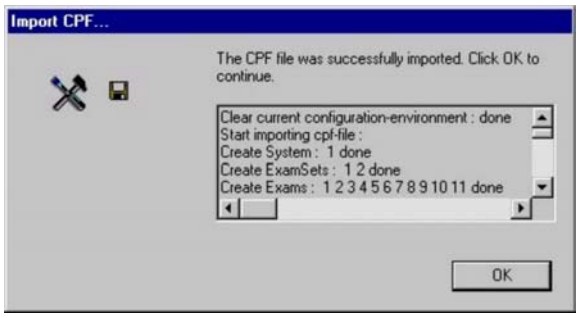
(13) The `Import` window appears.

Select floppy drive

Select cpf-file to be imported.

(14) Click `<Open>` button to start import.

(15) `Import CPF ...` window appears.


Import CPF...
The CPF file was successfully imported. Click OK to continue.
Clear current configuration-environment : done
Start importing cpf-file :
Create System : 1 done
Create ExamSets : 1 2 done
Create Exams : 1 2 3 4 5 6 7 8 9 10 11 done
OK

CPF-file is imported. This may take some time depending on the size of the CPF-file.

(16) When finished the `Printer Configurator` window appears.

The printers displayed in the list are known to the application now, but still have to be configured in the NT environment.

Write down the name of the printer (case sensitive) to be installed as it will be needed further on in this procedure (step (25)).

(17) Select a printer from the list and click `<Install>`

(You can only install one printer at a time).

(18) Welcome screen appears.

Click `<Next>`

(19) Click `<ACCEPT>` for license agreement.

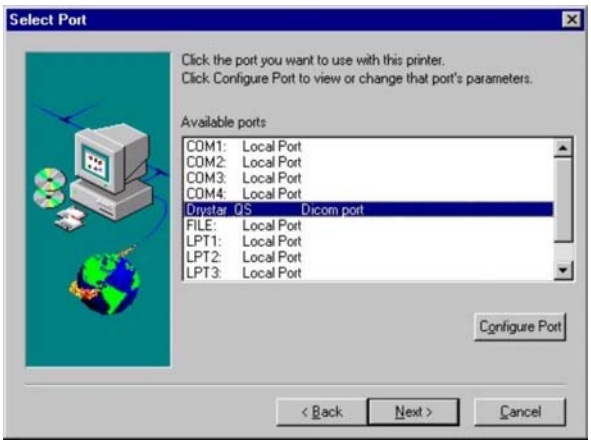
(20) `Printer Connection Type` screen appears.

Select “It is directly connected to your computer (Local Printer)” and click `<Next>`

ADC QS

Server

(21) `Local Port Selection` window appears.



Select the DICOM port for your printer and click `<Next>`

(The proper port contains the destination name of the printer like in CPF-file and the term Dicom Port.)

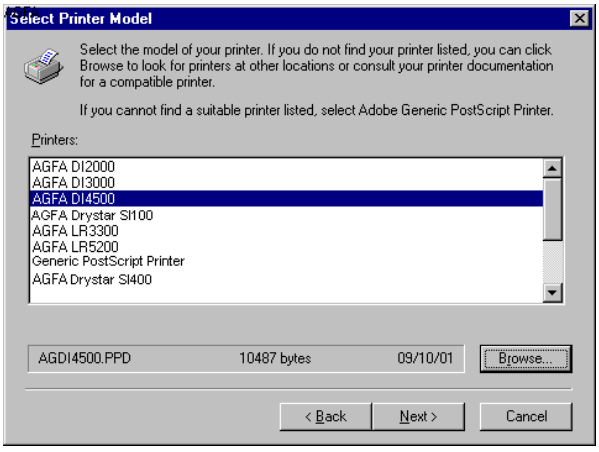
(22) `Select Printer Model` window appears

Click `<Browse>`

Select directory `E:\Agfa\CompasServer\Printer Setup\ppd` and select your printer type from the list.

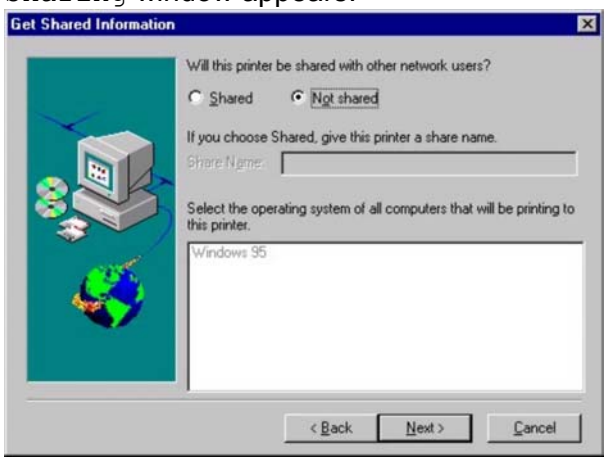
Click `<OK>`

(23) `Select Printer Model` window appears again


Select Printer Model
Select the model of your printer. If you do not find your printer listed, you can click Browse to look for printers at other locations or consult your printer documentation for a compatible printer.
If you cannot find a suitable printer listed, select Adobe Generic PostScript Printer.
Printers:
AGFA DI2000
AGFA DI3000
AGFA DI4500
AGFA Drystar SI100
AGFA LR3300
AGFA LR5200
Generic PostScript Printer
AGFA Drystar SI400
AGDI4500.PPD
10487 bytes
09/10/01
Browse...
< Back
Next >
Cancel

Click `<Next>`

(24) `Sharing` window appears.


Get Shared Information
Will this printer be shared with other network users?
Shared
Not shared
If you choose Shared, give this printer a share name.
Share Name:
Select the operating system of all computers that will be printing to this printer.
Windows 95
< Back
Next >
Cancel

The selection depends on whether you want to print from the ADC QS Server only, or if a client station should also be able to use the printer.

If the printer should also be available from the client, select `<Shared>` and enter a name for the shared printer.

Click `<Next>`

(25) `Printer Information` window appears.

Delete the printer name in the field and enter the destination name of the printer noted down before.

If it is the second printer, you can select it as default printer.
Select `<No>` for “Would you like to print the testpage”
and click `<Next>`

(26) `Setup Information` window appears.

Check if everything is OK and click `<Install>`

(27) If the “Read only file detected” dialog appears, click `<Yes>`

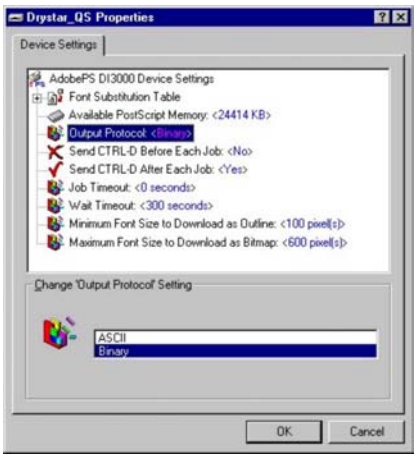
(28) `Printer Configuration` window appears

Select `<Yes>` on “Would you like to configure your printer now?”
and click `<Next>`

ADC QS

Server

(29) The `Device Settings` window appears.



Select `<Output Protocol>` and set it to `<Binary>`

Click `<OK>`

(30) `Setup complete` window appears.

Uncheck “Yes I want to read the ReadMe file” and click `<Finish>`

(31) The `ConfigView` window asks you to print a testpage. Click `<No>`

(32) Repeat steps (16) to (31) for all printers in the list.

(33) Click `<Cancel>` when finished and `<OK>` on `ConfigView` info window

(34) Click `<OK>` on “Importing CPF-file window”

(35) Reset ADC QS application

1.3 Troubleshooting

If the **printer configuration failed** for whatever reason go on that way:

- Check that printer queue is really empty
- Remove the printer from the cpf-file
- Stop ADC QS
- Start only `ConfigViewer`
- Import cpf-file
- Remove the printer from NT-Printer settings, if it is still there
- Add the printer again to the cpf-file and import the cpf-file again
- Start printer configuration again and follow exactly the instructions!

2 Adding Medical Printers to ADC QS Client Station

Printers which should be available for printing on the client station must have the status "shared" for network access on the server station.

The server station must be up and running.

(1) Stop the ADC QS application

(2) Click on NT Start button

(3) Select
`Settings`
`Printers`

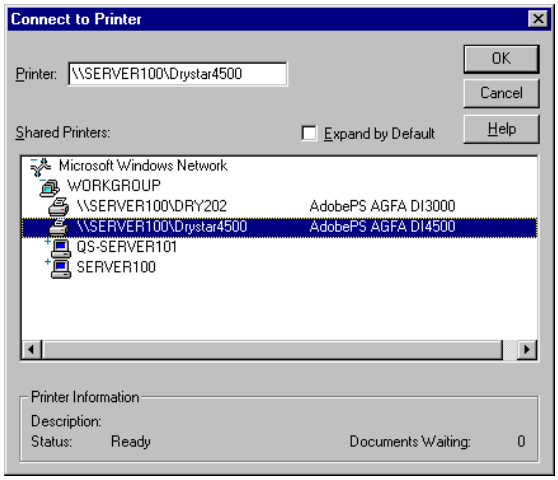
(4) Double click `Add Printer`

(5) Add Printer wizard starts

Select `Network printer server`

and click `<Next>`

(6) `Connect to Printer` window appears



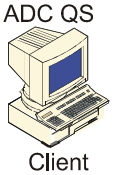
Browse (double click) and locate the printer

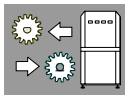
Click `<OK>`

(7) Select `<No>` on question “Do you want your windows based programs to use this printer as the default printer?” (appears only from 2nd printer on)

Click `<Next>`

(8) Click `<Finish>`





3 Supported printers

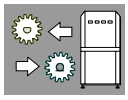
Printers	Corresponding ppd-files
AGFA DI2000	**AGDI2000.ppd**
AGFA DI3000	**AGDI3000.ppd**
AGFA DI4500	**AGDI4500.ppd**
Agfa Drystar SI100	**AGSI1001.ppd**
Agfa Drystar SI400	**AGSI4001.ppd**
AGFA LR3300	**AGLR3300.ppd**
AGFA LR5200	**AGLR5200.ppd**
KODAK IM8100	**KDIM8100.ppd**
KODAK IM8300	**KDIM8300.ppd**
KODAK IM8500	**KDIM8500.ppd**
KODAK IM8600	**KDIM8600.ppd**
KODAK IM8700	**KDIM8700.ppd**
KODAK KELP2180/KELP1120	**KDLP2180.ppd**

The printers **Agfa Drystar SI100** and **Agfa Drystar SI400** can be installed as normal DICOM printers and it is not necessary to install them as PS printers. **Before** upgrading to version 2.0.08 you have to delete them as PS printers and install them after the upgrade with the correct ppd-file as DICOM printers.

1 ADC QS : Tips & Tricks for ADC QS 2.0.09

1.1 Installation

- **Printers on a client** system should be installed through the NT 'Add printer' wizard. 'Synchronize printers' is not available in the ConfigViewer on client systems.
- The ADC QS application must be **stopped** before **installing printers**.
- The **Adobe wizard** has to be stopped after each printer installation (i.e. on the server).
- The printer setting should be set to **spool the print job** before print.
- The **Agfa Drystar SI100** and **Agfa Drystar SI400** can be installed as normal DICOM printers. Before upgrading you have to delete them as PS printers and install them after upgrading with the correct ppd-file as DICOM printers.
- If a **printer configuration failed** for whatever reason go on that way:
  - Check that printer queue is really empty
  - Remove the printer from the cpf-file
  - Stop ADC QS
  - Start only Configuration Viewer
  - Import cpf-file
  - Remove the printer from NT-Printer settings, if it is still there
  - Add the printer again to the cpf-file and import the cpf-file again
  - Start printer configuration again and follow exactly the instructions!
- Layouts like 10INx12IN on DI4500 are called **New Vips layouts** or **no-MG3 layouts**. These layouts can be generated only if the cpf-file supports them. The table PS in the cpf-file needs to be changed : set **all_film_format_printing = 'Y'** for each ADC-QS server which has to support the New Vips layouts. This cpf must be installed on the PRID (12.09) which converts the exam related film layout.
- Cassette related hardcopy layouts are still supported as long as PRID is used to identify cassettes.
- The full ADC QS application should be started to make the **backup** task work.
- The display setting should be set to TRUE COLOR to make the **gateway** work properly.
- The **Regional Settings Properties** should be checked, that the decimal symbol is a point and the digit grouping symbol is a comma. Other settings cause problems by viewing with IMPAX.
- When **licenses** are gone during normal operation, select the option 'Restore Licenses' in the Startup->Agfa->ADC-QS->Tools menu.
  When new licenses are added or removed after delivery from production, make a backup of the licenses by selecting the option 'Backup Licenses' in the Startup->Agfa->ADC-QS->Tools menu.



- If **backup task** from task manager is executed it may take up to 10 minutes. Time depends on the number of images. The system gives no feedback if backup task is running. You can check the progress at NT Explorer directory J:\BackupCompas; as long as the file size is growing the backup is running.

1.2 Task Manager

General

- Some tasks allow freely editing and deleting of its parameters. If these parameters are removed (by a wrong user operation), it is very hard to find back the correct parameter names. Therefore we recommend **not to edit the task parameters at all**. The default parameters are the tested ones and guarantee a proper working of the system!

If you are faced to a problem where a change of the settings may be necessary please **first contact an expert** (GSC).
If settings are already changed and the system does not run proper, please contact an expert (GSC).

- If status of a task in ADC QS task manager is ACTIVE_EXECUTING and the “Deactivate” button is used, the task status is changed to INACTIVE_EXECUTING. This is an invalid status and it is not possible to make this task running again. Prevention: Never use “Deactivate” button while task status is ACTIVE_EXECUTING.

- The Configuration Viewer task manager does not update the status of a task when it changes. The only way to verify if a task is still running is in the NT-task scheduler.

- A task only works when server is running. Editing a task while the server is not running gives an error which can not be bypassed. In order to be sure that the server is running reset ADC QS Software, also if a problem occurs reset the ADC QS Software.

QC Phantom task

- The task manager lists QC Phantom task as ACTIVE, but this task is INACTIVE. This task is not implemented and can not be edited.

1.3 Troubleshooting

- **Locked File Problem after upgrade from Web Admin**
  If during an installation you receive the error message 'An error occurred during the data move process - 115', then a program file is currently locked by the system and can't be replaced. To rectify this, stop the following services from the Control Panel::Services applet:
  Spooler
  World Wide Web Publishing Service
  Now retry the installation. It should now work as the program files are in the unlocked state.

- **Permissions Problem:**
  At present, you should have **local machine Administrator** privileges to install ADC-QS. This means you must install under ***Administrator*** account or the ***compas*** account must be a member of Administrators group. The compas account is added to Administrators group during the Server installation.
  Without Administrator privileges may experience the locked files problem described above. Also you won't be able to set up any local printers on the system.

- **Missing Configuration:**
  If for some reason the configuration settings are missing, you can run the ***Restore*** task to recover them (assuming you did back a backup originally). From the configuration viewer – select **Restore** from the list, click <Modify>, ensure field 'OnlyRestoreConfig' is set to 1 (one). Click <OK>. Click now on <Activate> if the task is INACTIVE, then click <Execute>.
  The settings are restored. Click on desktop button 'Reset ADC-QS' to activate the restored settings.

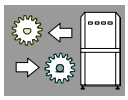
- **Images Not Visible:**
  If for some reason the images are not visible, you can run the ***Restore*** task to recover them (assuming you did back a backup originally). From the configuration viewer – select **Restore** from the list, click <Modify>, ensure field 'OnlyRestoreConfig' is set to 0 (zero). Click <OK>. Click now on <Activate> if the task is INACTIVE, then click <Execute>. The settings and data are restored. Click on desktop button 'Reset ADC-QS' to activate the restored settings.

- **Printing Problems from Client**
  In case of printing problems from client check:
  - Printer has to be installed as a NT network printer on the client station. Print server has to be the ADC QS server.
  - Check `System monitoring`
    `Network`
    `Protocols`
    Here you must find 'TCP/IP-Protocol' and 'NetBEUI Protocol'.

- **Wrong window level values**
  Window level values are wrong if the "Regional Settings Properties" are incorrect. Check that that the `Decimal symbol` is a point
  and the `Digit grouping symbol` is a comma at the tab "Number".

- **"Layout" and "TextBox" Editor at "Tools" menu**
  The "Layout" and "TextBox" Editor are now to find at the "Tools" menu in the main menu bar.

- **Uninstaller setup failed to initialize**
  During installation the message "Uninstaller setup failed to initialize. You may not be able to uninstall this product." pops up. This prevents the "Uninstall" button from being created in the Add/Remove Programs applet and the application normally cannot be uninstalled.
  This occurs because the Uninst.isu file in the install target folder (that is the location where you are installing to) has become corrupt. To remedy this, you need to delete all files in the install target folder, and try again



1 Integrating ADC-QS into an Existing NT Domain

By default the systems delivered by AGFA are set up to operate in an unmanaged ‘peer to peer’ network pool called ‘WORKGROUP’. This name ‘WORKGROUP’ is the same for all language versions of ADC-QS.

Further to this the ADC-QS Server and Client machines are set up with 2 local machine accounts:

Account	Password
administrator	(empty)
compas	compas98

Both these accounts are members of ‘Administrator’ group on the local machine. By default ADC-QS runs under the ‘compas’ account. The advantage of running ADC-QS as part of ‘WORKGROUP’ is that the administration tasks are much reduced – the downside to this is that there is almost no security in place.

In many hospital environments ADC-QS will be used as part of a secure NT domain. To add new ADC-QS systems to the domain will require assistance from the local NT Domain Administrator (who has the passwords and authority required). Follow the sequence below to add an ADC-QS Server or Client into a domain:

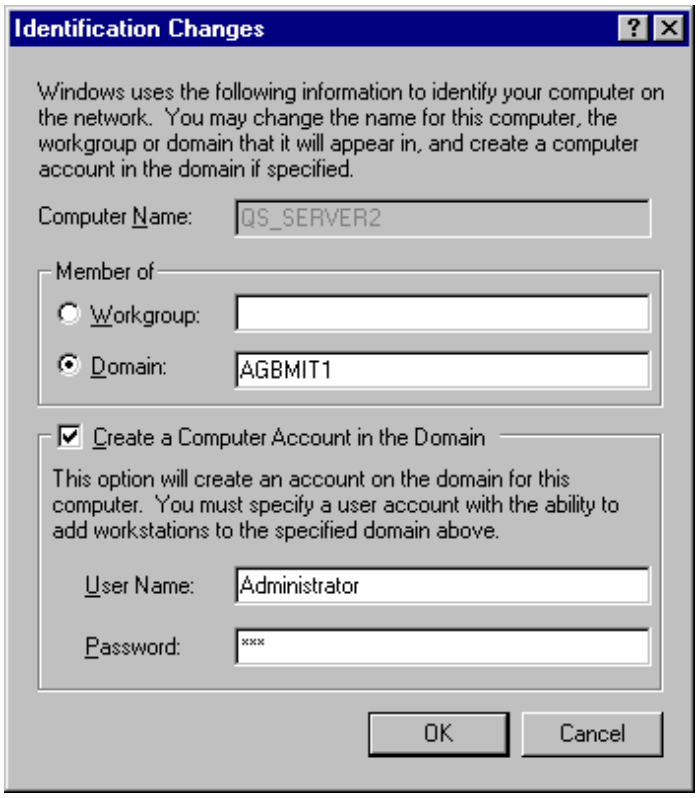
1.1 ADC QS System Name

Change the system name to the new name assigned by the domain administrator – Start Menu::Settings::Control Panel::Network::Identification, click on button ‘Change’, enter the new name, click <OK> . Click <OK> on confirmation dialog, click <Close> on the network control panel, dialog ‘… You must shut down and restart your computer… Restart now’, click <Yes>. The system restarts.

Changing the computer name results automatically also in a change of the host name (standard NT behavior).
This change of name also has to be written in manually in the cpf-file, otherwise the gateway will not start.

1.2 Add ADC-QS System to Domain

Log back in as local system *Administrator* (blank password). Hold down the shift key to defeat any auto-login. Once logged in, stop any ADC-QS auto-start (Server only). From Start Menu::Settings::Control Panel::Network::Identification, click on button 'Change', click on radio button 'Domain', enter the domain name. Select checkbox 'Create Computer Account in the Domain', enter the **Domain Administrator** name and password. Click <OK>.

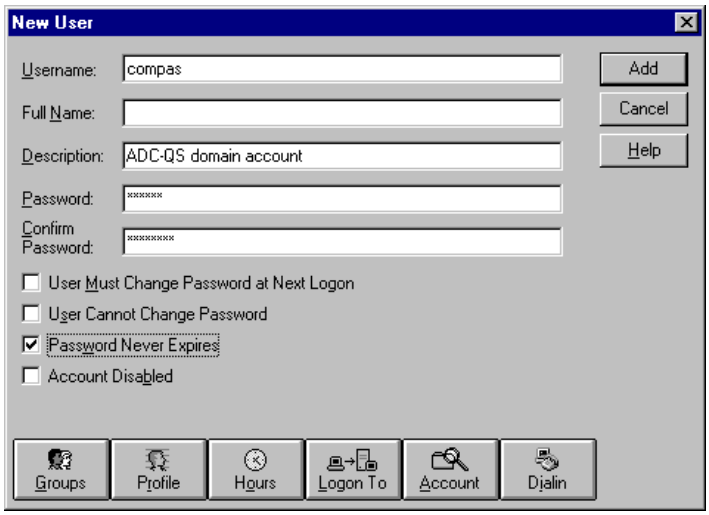

Identification Changes
Windows uses the following information to identify your computer on the network. You may change the name for this computer, the workgroup or domain that it will appear in, and create a computer account in the domain if specified.
Computer Name:
QS_SERVER2
Member of
Workgroup:
Domain:
AGBMIT1
Create a Computer Account in the Domain
This option will create an account on the domain for this computer. You must specify a user account with the ability to add workstations to the specified domain above.
User Name:
Administrator
Password:
***
OK
Cancel

Upon success the message 'Welcome to <Domain Name>' will popup. Click <OK>, then <Close>, dialog '… You must shut down and restart your computer… Restart now', click <Yes>. The system restarts.

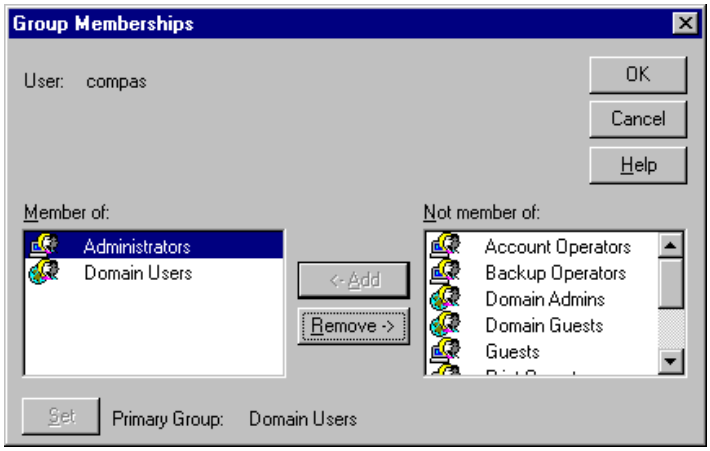
1.3 Add Compas Account to Domain

Note: The compas account only needs to be added one time to the domain. If this step has already been completed, skip ahead now to **1.4**.

Logon as **domain administrator** in the new domain. Select Start Menu::Programs::Administrative Tools (Common)::User Manager for Domains.
Select menu entry 'User::New User' and add the compas details as shown below (the password is ***compas98*** as usual). Note especially the checkbox settings.



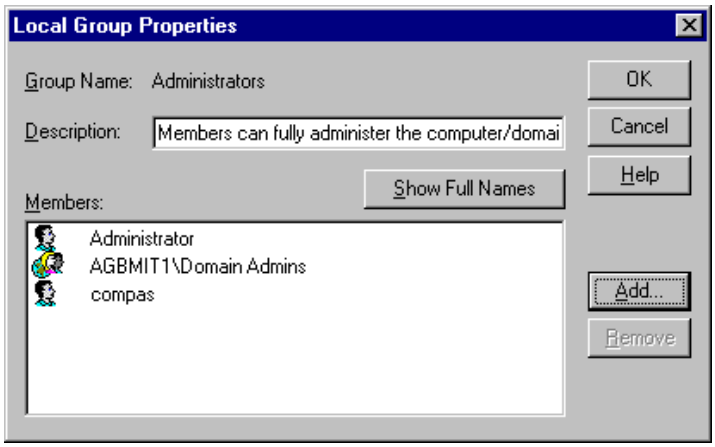
Select now the 'Groups' button. The following dialog is displayed:



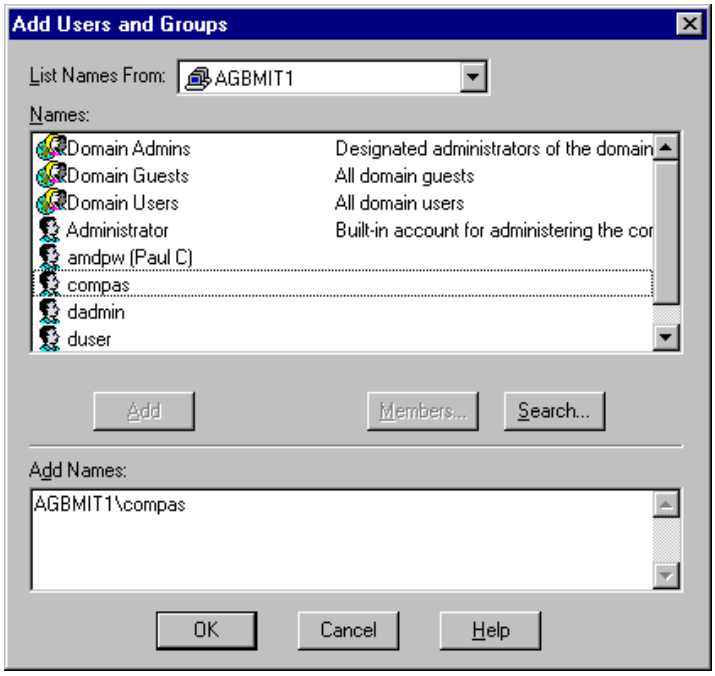
Ensure ***compas*** is member of 'Administrators' and 'Domain Users' (select from the list on the right). Click <OK>., then <OK> again back in the 'New User' dialog. The ***compas*** user then shows up in the 'Username' list. Close the User Manager (Alt-F4, or menu User::Exit). Log off now as **domain administrator** (Start Menu::Shut Down::Close all programs and log on as a different user).

1.4 Adding Domain User to Local System

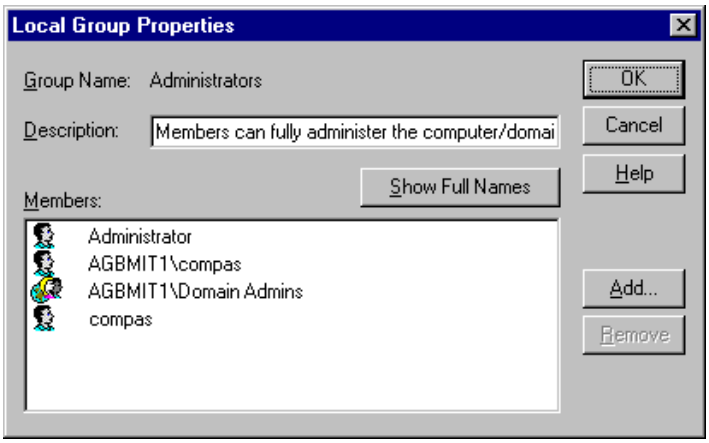
Log back in as local system *Administrator* (**not domain logon !**). Start again the 'User Manager for Domains', double click on 'Groups->Administrators' in the list at the bottom half of the screen.



Click now on 'Add', select ***compas*** from the Names list of the domain, click on <Add>, the domain compas account is added to the Add Names list:



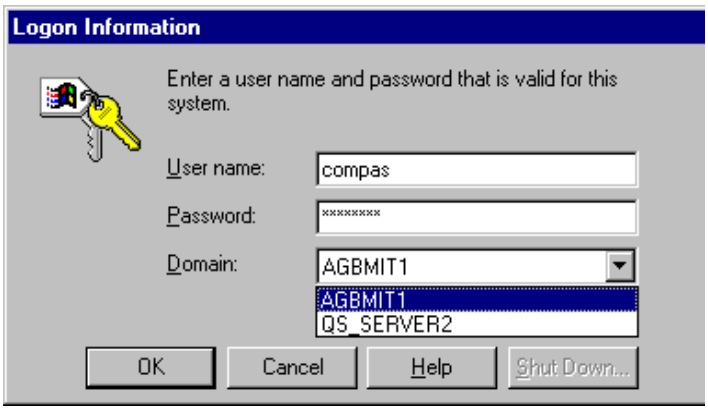
Click then on <OK> to close this dialog. The ***domain name\compas*** account will show up in the Local Group Properties::Members list:



Click then on <OK> to close this dialog. Close the User Manager (Alt-F4, or menu User::Exit).

1.5 Logging onto the Domain

Log-off from the local system ('Start Menu::Shut down::Close all programs and log-on as different user') ,then re-logon **using the domain account** as shown below:



Once logged in, ADC-QS is now available for use.

Notes:

a) The auto-login and auto-shutdown feature of ADC-QS Server is still working under domain log-in. To bypass the auto-login, hold down the *Shift* key during the login phase.

b) The domain administrator will normally carry out sections **1.3** and **1.4** for you. In this way you do not have to make a request for the domain administrator account and passwords.

c) Procedures for setting up printers and other devices from the ADC-QS Server remain the same under domain login.

Technical Standard Modifications

8

Chapter 8

contains an overview of all technical modifications. This refers to hardware as well as software modifications.

Maintenance

9

Chapter 9

describes all routines and tests necessary during maintenance.

Order No.: DD+DIS249.01E
1 Piece UR8EH Ma1

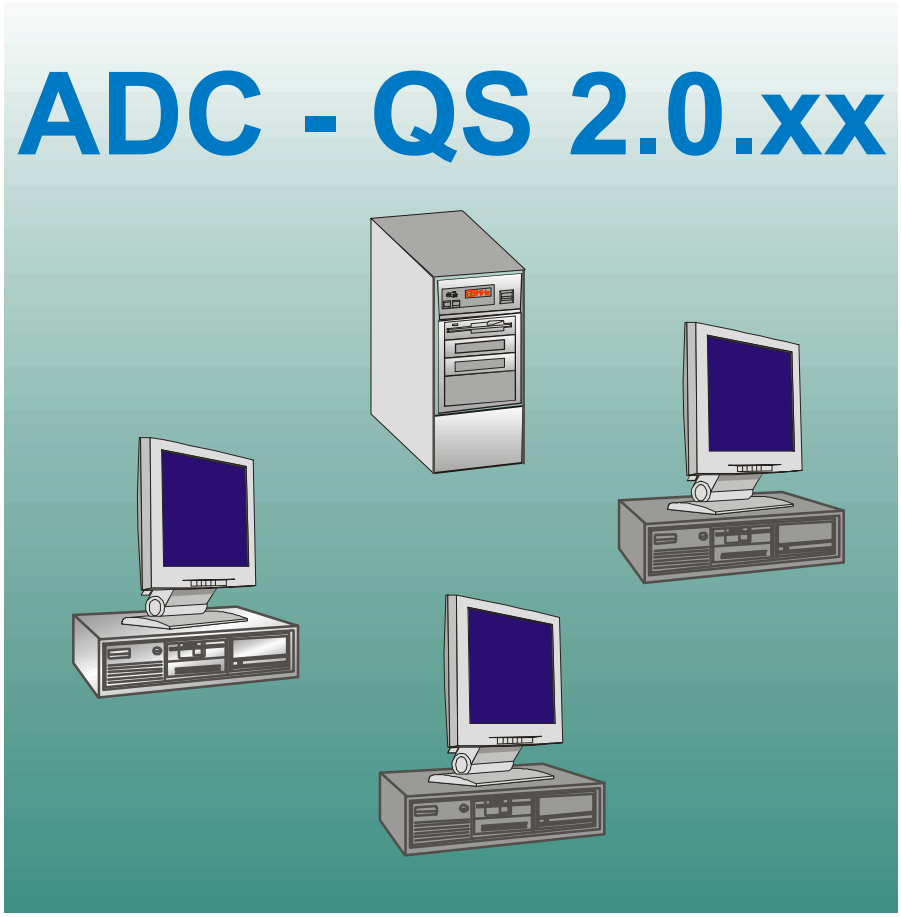
ADC Quality System
Type 4406 / 421

Maintenance Instructions

for the ADC QS Quality System:

- ID Station
- ADC QS Client Station
- ADC QS Server Station

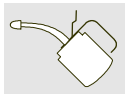
1st edition



This documentation is separately available. Order No: DD+DIS249.01E

printed in Germany 11 / 2001

AGFA



List of Contents

1 Maintenance Points ID - Station.....1

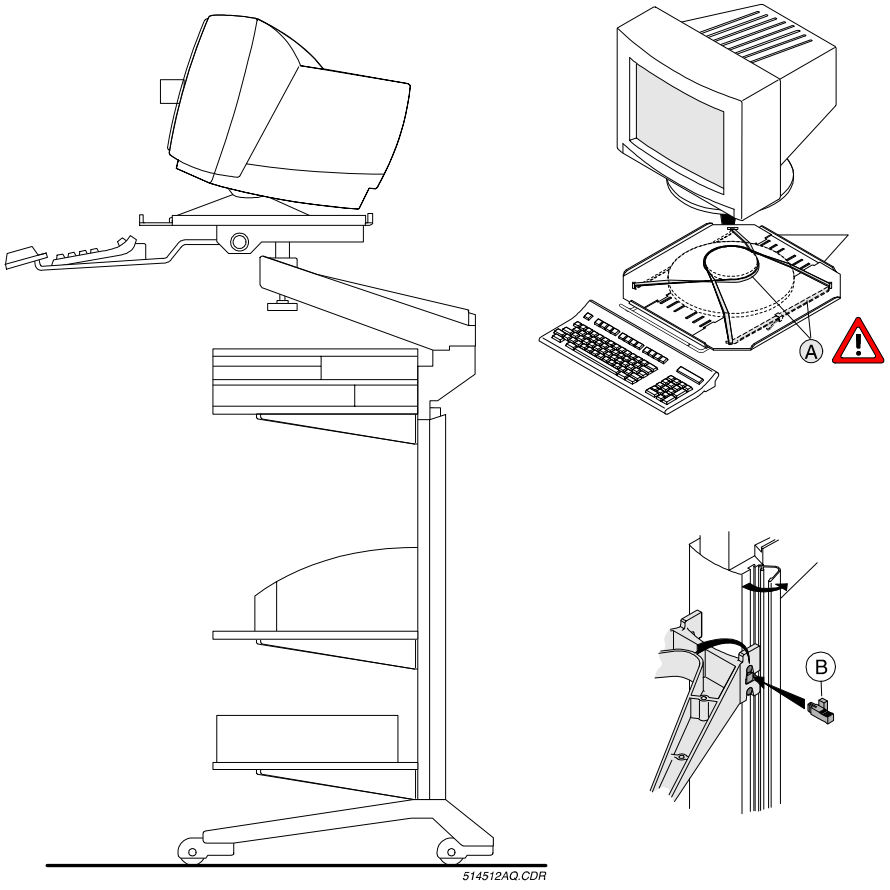
2 Maintenance Points ADC QS Server/Client Station.....2

3 Maintenance Checklist.....3

1 Maintenance Points ID - Station

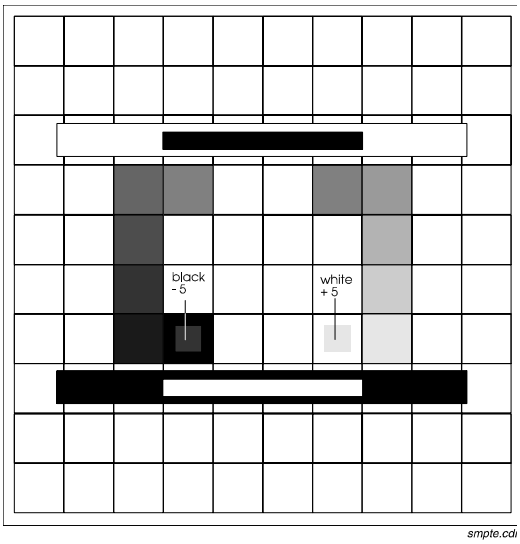
Cleaning, visual and functional check of the ID - Station

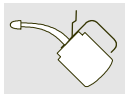
Device	Action	Auxiliary equipment	Details see
ID - Tablet	Clean the surface of the ID tablet.	Soft cloth, (Isopropanol, plastic cleaner)	
	Check the cassette duct for tight mounting.		
ID - Console	Check the console for damage.		
	Check all cables, cable connections for damage and loose contacts.		
	Check the protection of the monitor (cable ties).		Fig. (A)
	Check that all protection clips exist.		Fig. (B)
PC ID - Station	Clean the ventilation openings of the PC.	Vacuum cleaner	
	Check the function of the ID Station by identifying a cassette.	Cassette	
Monitor	Clean monitor	Screen cleaner	



2 Maintenance Points ADC QS Server / Client Station

Cleaning, visual and functional check:

Device	Action	Auxiliary equipment	Details see
Server Station	Clean the ventilation openings. Clean interior fans.	Vacuum cleaner	
Machine and Periphery	Check all external cables and cable connections for damage and loose contacts.		
Monitor	Check calibration of the monitor	SMPTE test pattern	
	 Check: Brightness - Contrast: **The small squares of the test image (black -5%, white +5%) must still be visible.** Linearity: **The lines must be straight throughout the entire area.** Aspect ratio: **The squares must be perfectly square.**		
	If an image error was detected, talk to the radiologist to decide the recalibration of the monitor. Recalibrate the monitor contact the responsible Application Specialist.	Luminance meter	see Sec. 6.6



3 Maintenance Checklist

Operating procedure for order no.

System components to be inspected:

- ❑ **ID / PRID - Station** **SN.....** **SN.....**
- ❑ **ADC QS Server Station** **SN .....**
- ❑ **ADC QS Client Station** **SN .....**

Device	Test Point - Maintenance Point	OK	not OK
Complete System	Talk to the operators about possible problems. Talk to the physician in charge about the image processing parameters in the various menus.		
ADC QS – Server Station	Clean the ventilation openings of the Workstation. Clean the interior fans.		
ADC QS Server Station and Periphery	Check all external cables and cable connections for damage and loose contacts.		
ID – Station	Clean the PC (ventilation openings).		
	Check the function of the ID Station by identifying a cassette.		
ID – Tablet	Clean the surface of the ID tablet.		
	Check the cassette duct for tight mounting.		
ID – Console	Check the console for damage.		
	Check all cables and cable connections for damage and loose contacts.		
	Check that all protection clips of the tables are present.		
	Check the protection (cable ties) of the monitor.		
Monitor	Check calibration of the monitor by means of a SMPTE test pattern. If an image error was detected, talk to the radiologist to decide the recalibration of the monitor. Recalibrate the monitor or contact the responsible Application Specialist.		
	Clean the monitor.		
Complete system – Image quality	Expose a grey field (flatfield) and evaluate the image on the workstation and the Laserprinter. Criteria: homogenous field, stripes a.s.o. Recalibrate if necessary.		

Device	Test Point - Maintenance Point	OK	not OK
Complete system - Image quality	Check plates for running askew with a test sheet. Check test sheet for wobbling of the Galvo in digitizer.		
Maintenance completion	Enter the <Maintenance date> in the service program.		
	At the end of the maintenance, hand over the maintenance checklist to the customer and inform him about the results of the maintenance.		
	If any image faults were detected, inform the responsible Application Specialist.		

Remarks:

.....

.....

....

Date / Signature Service Technician Customer

Field Service Bulletins

10

Chapter 10

contains the Fieldservice Bulletins, this is urgent and important information (usually on individual sheets) e.g.:

- Errors with safety aspects
- Errors in the series which can be restricted to a certain time or batch
- Special logistic actions

Order No.: DD+DIS262.01E

1 piece UUXJ8 MA1

ADC Quality System 2.0.xx

Type 4406/421

Rating			When?		
safety relevant	reliability	new function	immediately	next service	as required
	X				**X**

Please file this document in chapter 10 of your technical documentation

PRID 1.2.11 Software available now

1 General Information

PRID 1.2.11 will be delivered from production from now onwards.

2 Main Changes in PRID 1.2.11

The installation of PRID 1.2.11 is only essential with an ADC QS server running on DELL PRECISION 530. For this constellation a new Java library is introduced with PRID 1.2.11. For all other purposes PRID 1.2.09 can still be used.

3 Order Number

EB+44060006 PRID 1.2.11 + SOL_1302, incl. Documentation + COP_1308, incl. Documentation

printed in Germany 02 / 2002

AGFA

HealthCare

CSO Customer Support Operations

Field Service Bulletin No. 1

Order No.: DD+DIS276.01E

1 piece UTMNW MA1

ADC Quality System 2.0.xx

Type 4406 / 421

Rating			When?		
safety relevant	reliability	new function	immediately	next service	as required
	X		X		

Please file this document in chapter 10 of your technical documentation ADC QS 2.0.xx

New software version

ADC QS 2.0.09

available now

Dependent on the software version installed on the system, there are two possible ways of upgrading to ADC QS 2.0.09

1. Upgrade from software version ADC QS 2.0.08
   (Installation of a patch; must modification)
   This is described in chapter 1 of this document.

2. Upgrade from software versions ADC QS 1.0.00, 1.0.05 or 1.0.06
   (Installation of the complete software package)
   This is described in chapter 2 of this document.

printed in Germany 12 / 2001

AGFA

1 Upgrading from ADC QS 2.0.08 to ADC QS 2.0.09

1.1 General Information

The upgrade from **ADC QS 2.0.08** to **ADC QS 2.0.09** is a

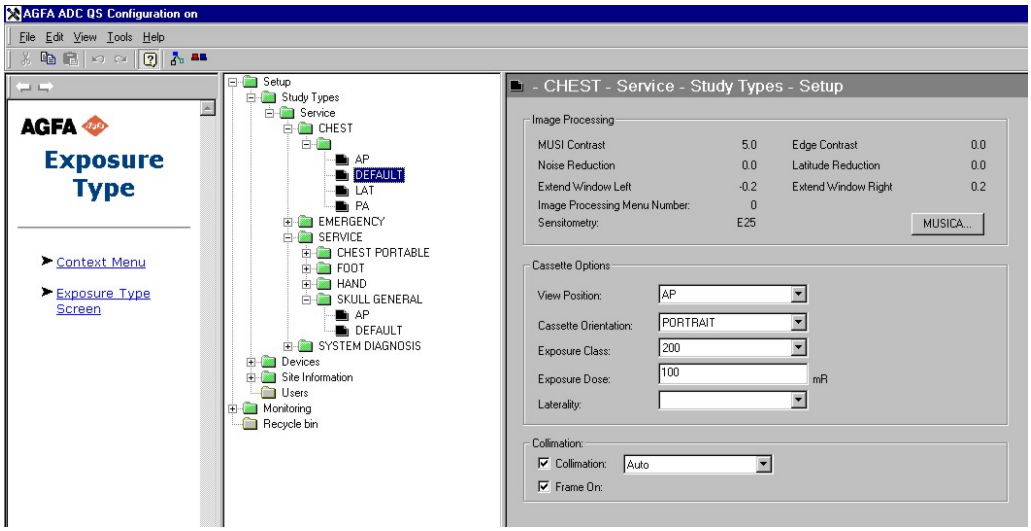
must modification

The "patch209.exe" has to be used, if you want to upgrade systems with ADC QS version 2.0.08 installed.

The patch from ADC QS 2.0.08 to ADC QS 2.0.09 can be downloaded from DigiNet (respectively MedNet from 01/2002 on).

Problem: If the SUB EXAM name contains the view position, e.g. AP; PA, LAT, this patient position is not derived correctly.

As a result, the system does not use the Image Processing parameters as configured in the cpf-file, but a default setting that puts Edge Contrast, Latitude Reduction and Noise Reduction to 0 and MUSI Contrast to 5.



Solution: Installation of ADC QS 2.0.09 resolves the problem.

1.2 Installation Procedure for Patch ADC QS 2.0.09

Patch ADC QS 2.0.09 has to be installed on the ADC QS Server Station.

(1) Close the ADC QS application

(2) Insert the floppy disk with Patch ADC QS 2.0.09

(3) Start NT Explorer and select floppy drive (drive a:)

(4) Double-click "patch209.exe"
The "ADC QS v. 2.0.09 patch" window appears.

(5) Click <OK>.
"Stop ADC QS ?" window appears.

(6) Click <OK>.
"Updated completed successfully" window appears.

(7) Click <OK>.
The installation of patch ADC QS 2.0.09 is finished now.

(8) Restart the ADC QS Server Station

2 Upgrading from ADC QS 1.0.00, 1.0.05 or 1.0.06 to ADC QS 2.0.09

The "upgrade kit" ADC QS 2.0.09 has to be used, if you want to upgrade systems with ADC QS 1.0.xx versions installed.
It replaces software version ADC QS 2.0.08 (EB+44060005).

ADC QS 2.0.09 can be ordered under order number **EB+44060007.**

A detailed installation documentation comes with the software package.

Additionally, it can be downloaded from DigiNet:
ADC QS / Documentation / DD+DIS275.01E

Installation Planning

11

Chapter 11

contains all planning data including the required measures to be carried out on site before the machine is delivered.

The section is divided into

- Construction planning data
- Technical connection and performance data
- Safety instructions

MEDICAL IMAGING

CSO Customer Support Operations

Installation Planning

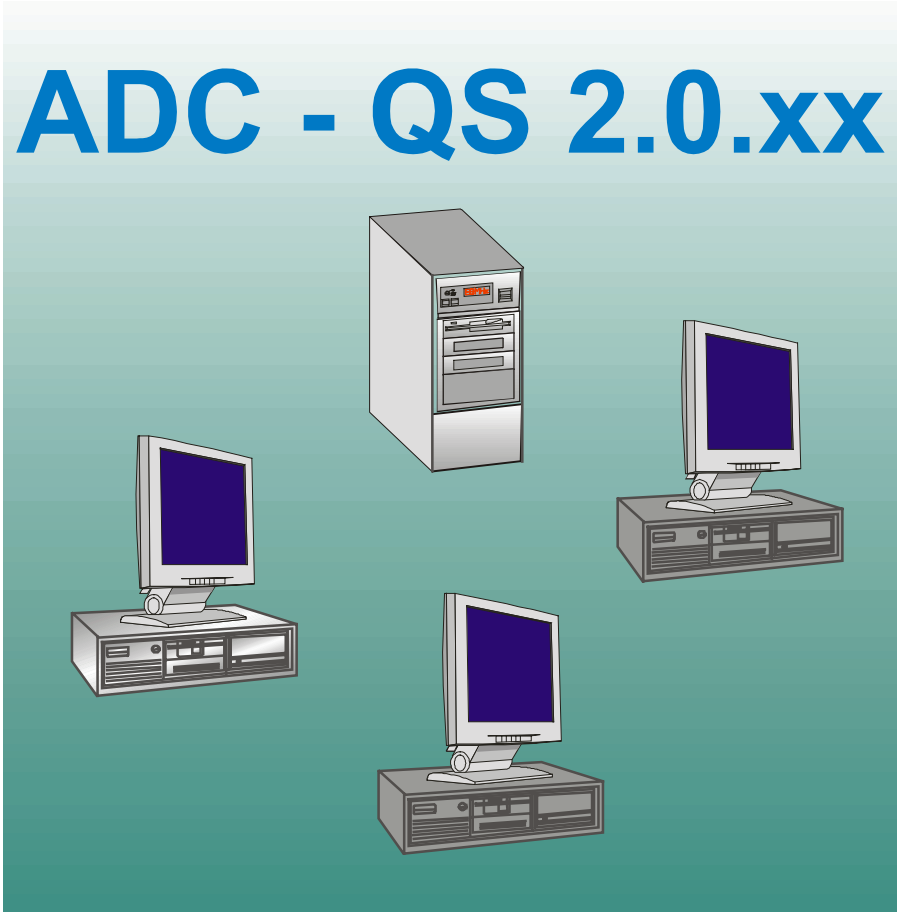
Order-No.: DD+DIS250.01E

1 Piece USASN MA1

ADC Quality System

Type 4406/421

1st edition



This documentation is separately available. DD+DIS250.01E

printed in Germany 11 / 2001

AGFA

Caution:

This system uses high voltage. Please consider the respective safety regulations.

These instructions describe adjustments and routines which must only be performed by qualified technical personnel.

Note:

Electrical repairs and connections must only be performed by a qualified electrician.

Mechanical repairs and connections must only be performed by a qualified technician.

CE Declaration:

The CE Declaration (CE Conformity) becomes invalid if the product is changed without explicit consent of the manufacturer! This applies to all parts, not only to safety elements.

We reserve the right to technical changes

Chapter 11:

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1 General

This document describes the Installation Planning of the ADC QS ID-Station, the ADC QS Client Station and the ADC QS Server Station.
For the Installation Planning of the ADC Digitizers, please refer to the following documents:
ADC Compact Digitizer: DD+DIS288.00E
ADC Solo Digitizer: DD+DIS217.98E

1.1 Safety Instructions

Electrical connections and repairs must only be made by authorized electricians.
Mechanical connections and repairs must only be made by authorized technicians.

For technical data of the commercially available devices as PCs and Workstations please refer to the corresponding user manuals!

1.2 Safety Regulations

The system component ID Tablet is tested in compliance with:

- IEC 950/EN 60950: 1992; A1: 1993; A2: 1993; A3: 1995; A4: 1997.
- UL1950, 3rd edition
- CSA 22.2 No. 950-95, 3rd edition.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communication.

It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart B of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

System Components

When operating the ADC QS System, you should always make sure that the following safety checks have been taken before bringing the System into use:

- do not bypass or disable any incorporated safety features.
- always disconnect any components of the ADC QS System from the mains before carrying out service or maintenance.

AGFA-Gevaert reserves the right to modify and improve their equipment in order to adapt them to the latest technical standards.

There are no user-serviceable parts inside the ADC QS Server Station or the ADC digitizer.

Troubleshooting, as well as electrical or mechanical repairs, may only be carried out by qualified service personnel.

Perform no other operations on the ADC QS Server Station or the ADC digitizer than the ones described in the user manuals.

The only reliable means of protecting the Server Station against blackouts or other potentially damaging events such as power surges and brownouts, is to use the optionally available battery-backed uninterruptible power supply (UPS). The UPS (recommended option) ensures that the electrical flow to the workstation is not interrupted because of a blackout.

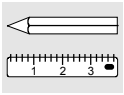
ID Station

The ADC ID Station complies with the UL544 standard for "Non Patient Care Medical Equipment". This means that, although it is absolutely safe, patients may not come into direct contact with the equipment.
Therefore, the ADC ID Station must be placed outside a radius of 1.5 m around the patient.
There are no user-serviceable parts inside the ADC ID Station. Perform no other operations on the ID Station than the ones described in the user manual.

ID Station Monitor

It is not necessary for the user to buy the monitor offered by AGFA. He may use / buy his own monitor. If he does, it should comply with certain criteria to ensure that it can be safely used in combination with the pedestal with regard to stability and securing method.

AGFA monitors are fully compliant.
The maximum size of the monitor is 17 inches.
The foot of the monitor should be such that it may be properly secured to the pedestal with the provided tie-wraps. It is the user's responsibility to ensure this.



ID Station Console

There are no user serviceable parts on the console.
Pay attention when working near the pedestal; the foot projects slightly and could be tripped on.
When rolling the pedestal away from its position, take care not to pull or put any strain on the power lead. The pedestal shelves should not be used as a footrest! If the shelves are re-positioned at a different height, the locking clips should be re-inserted.
If the user prefers to install a monitor other than the one provided / sold by AGFA, he should ensure that it locked to the top shelf of the pedestal at all times, according to the method described in section 1 (Installation) of this manual.
When moving the pedestal, take care to ensure that it remains stable at all times. In particular, the following considerations should be kept in mind: the nature of the floor and any floor-coverings, carpets, etc.; any obstructions such as cables; and any slopes to be negotiated.
Only attach appliances with line voltage equal to that of the ID Station.

1.3 ADC QS System Overview

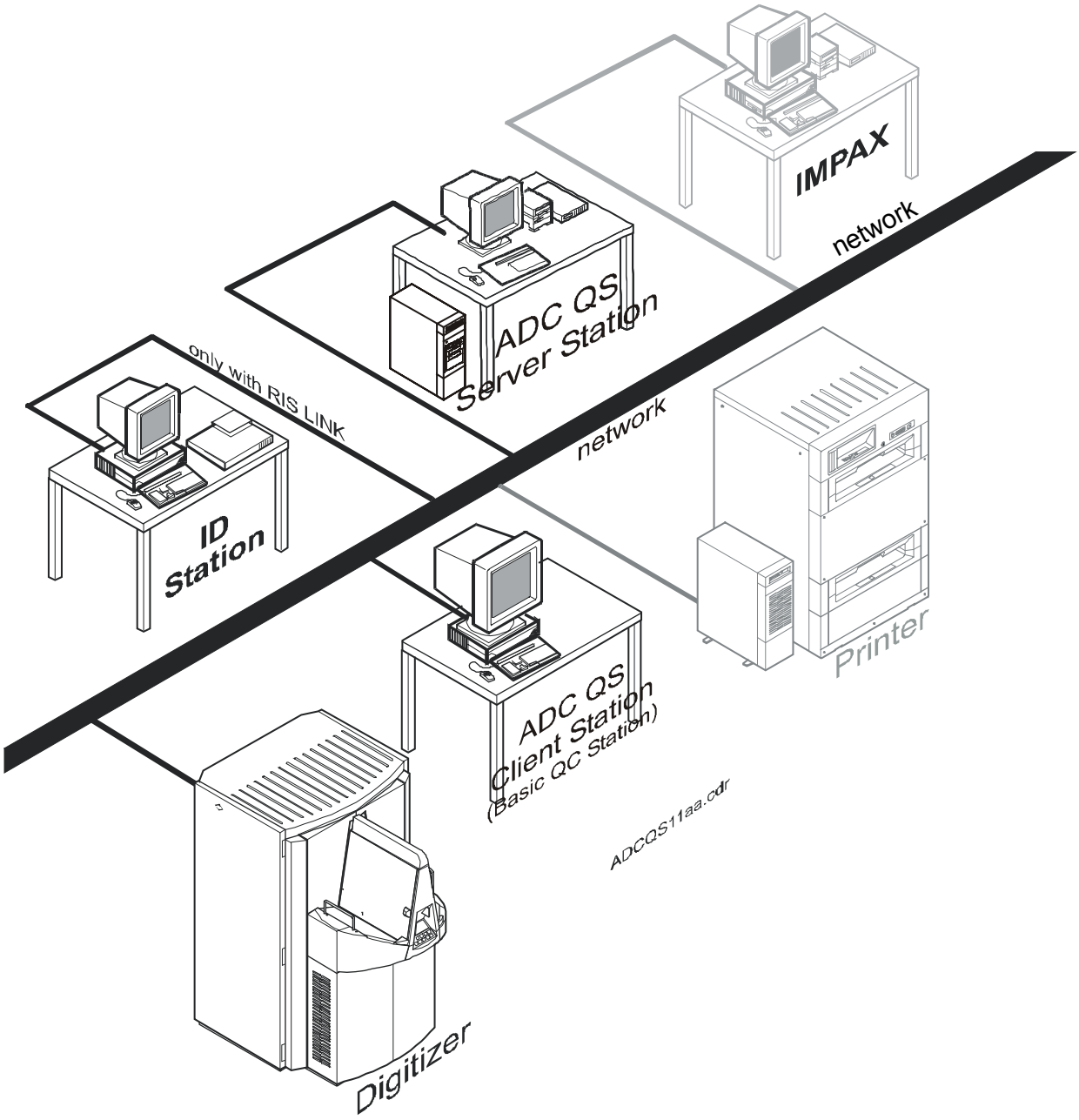


Figure 1

1.4 ADC QS Type List

Basic ADC QS Configuration:

Hard-/Software	Description	Type	ABC - Code
ADC Online-Processing SW	performs a multitude of tasks with the incoming raw data. supplies the user with a basic QC Viewer.	4406 /421	EC5S8
ADC QS PC-Server	DELL Precision 420	4406 / 001	ECZWV

Accessories Software:

Software	Description	Type	ABC - Code
ADC IPD-Viewer	A highly advanced tool for selecting, viewing, local archiving printing and transmitting images	4406 / 423	EC5TB
ADC QC-Viewer	A study oriented viewer for interactive image processing.	4406 / 004	-----
ADC Autorouting	A menu-driven option that sends images to their destinations completely automatically.	4406 / 428	EC5WH
ADC Uro/Tomo	MUSICA processing parameters optimized for urography & tomography examinations.	4406 / 436	EC53U
ADC Pediatric	MUSICA processing parameters optimized for pediatric examinations.	4406 / 435	EC52S
ADC Dental	MUSICA processing parameters optimized for dental examinations.	4406 / 437	EC54W
ADC Smartprint	Extended print functions (e.g. layout editor, etc.)	4406 / 433	EC51Q
ADC Annotation	Option to measure and annotate images on-screen.	4406 / 431	EC5XK
ADC Black Border	Automated semi-transparent masking of collimation borders.	4406 / 432	EC5YM
ADC Multi-Format IMP/EXP	Option that offers the possibility for off-line transmission via media (e.g. DVD)	4406 / 011	EDBS3
ADC DICOM Store Connection	Option that allows to perform on-line transmission in the Dicom standard communication protocol format.	4406 / 426	EC5VF

Not all above mentioned software options are part of the first release ADC QS.

Accessories Hardware:

Hardware	Description	Type	ABC - Code
ADC Standard PC	DELL Optiplex Gx 110+	4406 / 002	ECZXX
ADC VGA Monitor	17" monitor DELL P790-HE Trinitron	4406 / 003	ECZYX
ADC SB1K Monitor	AGFA Standard Brightness Monitor 21"	4406 / 861	3678C
ADC HB1K Monitor	AGFA High Brightness Monitor 21"	4406 / 871	368BL
ADC UPS	Uninterruptible Power Supply	4406 / 890	368CN
ADC Test Phantom Set	for quality control	4406 / 930	37KC3
AGFATEK Link Service Host	for remote access	-----	LDQUT

2 ID Station

2.1 Machine Dimensions ID Station

PC: for dimensions refer to the "Technical Data" of the corresponding PC User Manual.

Cable length ID-Tablet - PC: 2 m.

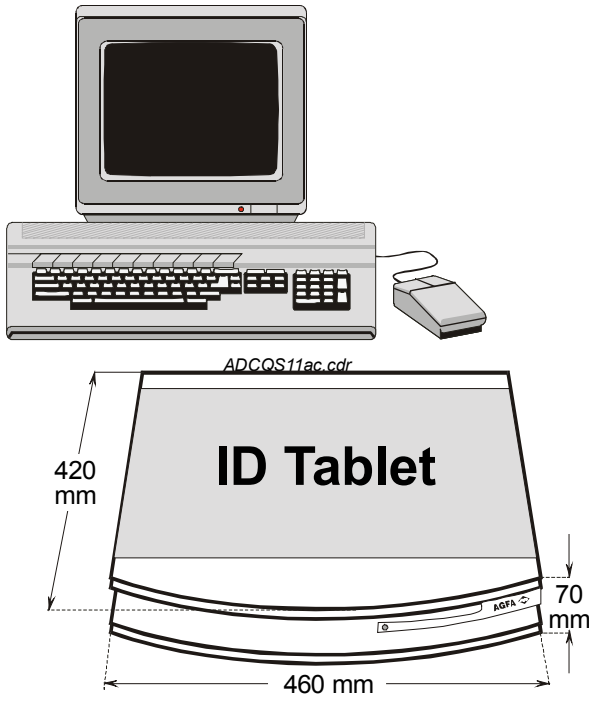


Figure 2

2.2 Machine Dimensions ID Station with Console and Cassette Rack

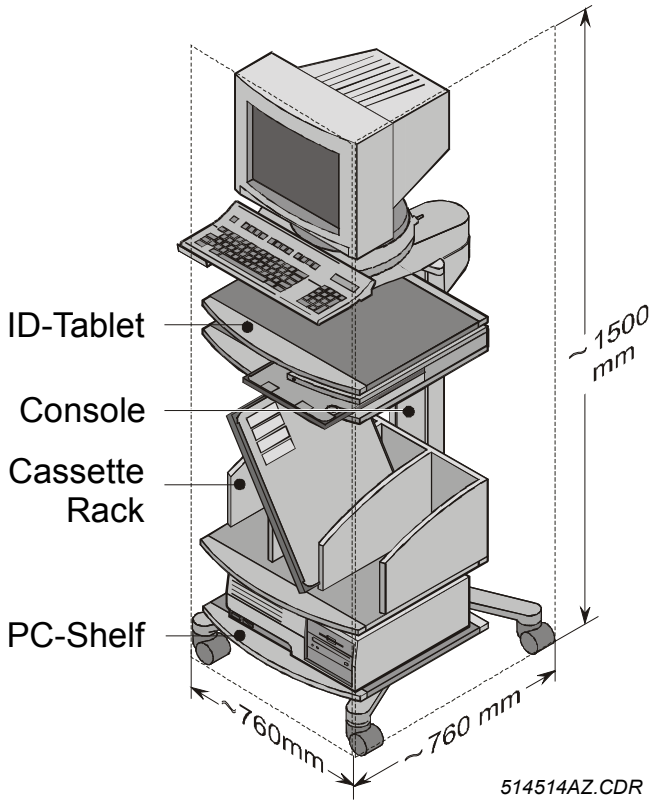


Figure 3

2.3 Technical Data of the ID Station

2.3.1 ID Tablet

Environmental Requirements

The ADC ID tablet must be installed at a site where the following operating conditions can be provided:

- room temperature: minimum 15°C, maximum 30°C
- relative humidity: at a room temperature of 25 °C, minimum 15 %, maximal 75 %.

Power Requirements

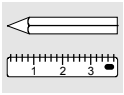
- mains voltage: 100 - 230 V ac
- frequency: 50 - 60 Hz
- max. rated current: 5 A (with appliance outlets loaded to the maximum)
- classification: Class I (grounded)
- fuses: Europe: 5 A slowblow /250V
  North America: 5 A slowblow /125V min
- the equipment is suited for continuous operation.

Power Consumption

ID Station:	PC incl. Monitor	120V ≈ 3A, 230V ≈ 1,6A
	ID Tablet	≈ 0,5 A

Delivery Modalities

The software for the ID Station is separately available (without hardware).



2.3.2 Hard- and Software Requirements for the ID Station

Hardware (*)	**Operating System**
DELL Midsize Desktop Optiplex GX110+ P3/600 MHz processor / 512 Kb Cache Intel 810E Chipset Internal floppy 3.5", 1.44 MB 3.5 @ FD/EIDE CD ROM Monitor 17" SVGA 256 MB 100 MHz SDRam 13.6 GB ATA66 EIDE HDD single head Matrox G200 / 16 MB graphics board country specific keyboard + wheel mouse + mouse pad network connection board: 10/100 mbit autosensing	**Windows NT 4.0 Workstation + Service Pack 5**

(*) This is the only hardware configuration that has been tested by AGFA. Therefore we strongly recommend to purchase the PC from AGFA. These PCs are staged in AGFA and all software is pre-loaded.

2.3.3 Electrical Connections

Mains connection	
Connection to an outlet	3 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
External fuse protection	min. 6 A slowblow, max. 16 A slowblow
Connection cable	Euro: 3 x H05VV - 3 x 1.5 mm², with grounded pin plug, cable length 2.5m US: cable SJT, 3 x AWG 18 with NEMA 5-15P, cable length 2.3m
Interface connections	1 x RS 232/9P for the ID tablet + 1 x mouse 1 x network connection (Ethernet) for RIS LINK (Option)

2.3.4 Environmental Requirements for the PC:

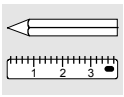
Temperature	10° -35°C;	50° - 95°F
Humidity	8 - 90%	

2.3.5 Packing Dimensions

ID STATION incl. ID Tablet	L x W x H: 33 x 58 x 55 cm
17" Monitor	L x W x H: 58 x 58 x 54 cm
ID Console	L x W x H: 84 x 84 x 143 cm
Rack	L x W x H: 48 x 44 x 29 cm

2.3.6 Weights

ID Tablet	with box: without box:	≈13 kg ≈ 9 kg
ID Station PC	with box: without box:	≈ 16 kg ≈ 15 kg
ID Console	with box: without box:	≈ 43 kg ≈ 21 kg



3 ADC QS Client Station (Basic QC Station) - DELL "Optiplex GX 110+"

3.1 Technical Data of the ADC QS Client Station

3.1.1 Hard- and Software Requirements for the Client Station

Hardware (*)	**Operating System**
DELL Midsize Desktop Optiplex GX110+ P3/600 MHz processor / 512 Kb Cache Intel 810E Chipset Internal floppy 3.5", 1.44 MB 3.5 @ FD/EIDE CD ROM Monitor 17" SVGA 256 MB 100 MHz SDRam 13.6 GB ATA66 EIDE HDD single head Matrox G200 / 16 MB graphics board country specific keyboard + wheel mouse + mouse pad network connection board: 10/100 mbit autosensing	**Windows NT 4.0 Workstation + Service Pack 5**

(*) This is the only hardware configuration that has been tested by AGFA. Therefore we strongly recommend to purchase the PC from AGFA. These PCs are staged in AGFA and all software is pre loaded.

3.1.2 Power Consumption

Client Station (PC incl. Monitor)	120V ≈ 3A, 230V ≈ 1,6A

3.1.3 Electrical Connections

Mains connection	
Connection to an outlet	3 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
External fuse protection	min. 6 A slowblow, max. 16 A slowblow
Connection cable	Euro: 3 x H05VV - 3 x 1.5 mm², with grounded pin plug, cable length 2.5m US: cable SJT, 3 x AWG 18 with NEMA 5-15P, cable length 2.3m
Interface connections	1 x network connection (Ethernet) for RIS LINK (Option)

3.1.4 Environmental Requirements for the PC:

Temperature	10° -35°C 50° - 95°F
Humidity	8 - 90%

3.1.5 Packing Dimensions

Client Station PC	L x W x H: 61 x 58 x 43 cm
17" Monitor	L x W x H: 58 x 58 x 54 cm

3.1.6 Weights

Client Station PC	with box: without box:	≈ 16 kg ≈ 15 kg

4 ADC QS Server Station – DELL Precision 420

4.1 Transport Path

It must be possible to transport the components of ADC QS through all hallways and doors up to the installation site.

Minimum Doorwidth: 60 cm

4.2 Technical Data of the ADC QS Server Station

4.2.1 Hard- and Software Requirements for ADC QS - Server

Hardware (*)	**Operating System**
DELL Single Precision 420 (Tower) P3/600 MHz processor Monitor 21", gray scale monitor (AGFA SB or HB monitor). Internal floppy 3.5", 1.44 MB CD-ROM/FD Drive 4 x 128 Mb SDRAM 2 x 9.1GB hard disks, 1.000rpm Matrox Millenium G400 graphics board country specific keyboard + wheel mouse + mouse pad network connection board: 10/100 mbit autosensing	Windows NT Server + Service Pack 5

(*) This is the only hardware configuration that has been tested by AGFA. Therefore we strongly recommend to purchase the PC from AGFA. These PCs are staged in AGFA and all software is pre loaded.

4.2.2 Power Consumption

ADC QS Server Station	120V ≈ 4A, 230V ≈ 2A

4.2.3 Electrical Connections

Mains Connection	
Connection to an outlet *	2 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
External fuse protection	Minimum 6 A slowblow, maximum 16 A slowblow
connection cable	2 x H05VV - 3 x 1.5 mm² with grounded pin plug, mains cable length approx. 2.3 m
Interface connection	1 x network connection (Ethernet)

***** If UPS is used, only one mains connection is necessary. All other devices are connected to UPS.

4.2.4 Connection Cables of the Individual System Components

If required, the following network connection cables may be ordered separately for the ADC QS Server Station.

ABC code	Network cable	Length
31D3F	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	5 m
31D4H	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	50 m
31D5K	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	100 m

The Ethernet cables of the system components should be positioned on the floor or along the wall in a cable duct.

4.2.5 Packing Dimensions

ADC QS Server Station	W x D x H / cm: W x D x H / in:	66 x 59 x 45 26" x 23" x 18"
AGFA standard brightness monitor	W x D x H / cm: W x D x H / in:	120 x 80 x 90 47" x 31.5" x 35.5"
AGFA high brightness monitor	W x D x H / cm: W x D x H / in:	120 x 80 x 90 47" x 31.5" x 35.5"

4.2.6 Weights

ADC QS Server Station	with box: without box:	≈ 29 kg ≈ 27 kg
AGFA standard or high brightness monitor	without box:	≈ 30,5 kg

5 Monitors

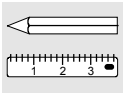
5.1 Technical Data of AGFA Standard Brightness Monitor

Synchronization	Horizontal scan rate	48 to 108 kHz (automatic adjustment)
	Vertical scan rate	60 to 80 Hz (automatic adjustment)
Input Signals	ECL digital	D-Sub 25 pin connector (1, 2 or 4 bits per pixel)
	Analog	3 BNC connector (composite on video or separate sync.) 13W3 and other connectors optional
CRT Specifications	Screen size	21“ FS
	Phosphor	P104 (other options available)
	Non-glare AR panel	Optional
	Display mode	Non-interlaced
Display Area	Horizontal width	16“ max (user adjustable)
	Vertical height	12“ max (user adjustable)
Video	Video band width	200 MHz (up to 300 MHz optional)
Resolution	Horizontal	1024 to 2048
	Vertical	768 to 1536
	Brightness	65 Footlamberts nominal HRMS™ allows the monitor to adjust automatically to a range of horizontal and vertical scan frequencies, providing compatibility with many hi-res display controllers for PC, PS/2, MAC, Sun, Apollo, DEC, Silicon Graphics and other workstations.
User Controls	Side	Power, Brightness and Contrast Controls
	Rear	Height, vertical position, width, horizontal position

Dimensions	Height	cm: 42 (48 with tilt-swivel base) in:16.5“ (19“ with tilt-swivel base)
	Width	cm: 49.5 in:19.5“
	Depth	cm: 48 in:19“
	Weight	kg:21.7 (24.9 with tilt-swivel base) lbs.: 48 (55 lbs. with tilt-swivel base)
Power Supply	Power consumption	100 Watts
	Input voltage	90 to 130 VAC, 220 to 250 VAC
	Input frequency	47 to 63 Hz

5.2 Technical Data of AGFA High Brightness Monitor

Power Requirements	Input voltage	90 – 264 V wide range power supply
	Power frequency	47 – 65 Hz
	Power consumption	150 Watts max.
	Power factor control	According to IEC 1000
	Power saving	According to VESA DPMS
CRT Specifications	Size	21“ flat square
	Deflection angle	90°
	Light transmission	30 %
	Phosphor type	P45, cadmium free
	Surface	Multicoated conductive panel (AR / AS)
	Gun system	Dispenser cathode (long life)
	Focusing	Static and dynamic
General Performance	Horizontal frequency	30 to 83 kHz
	Vertical frequency	50 to 120 Hz
	Formats	19 max., self recognizing and autosensing
Display Performance	Display Area (W x H)	400 mm x 300 mm
	Non-linearity	≤ 2 %
	Raster stability	0.05 mm max. swim & jitter
	Maximum brightness	≥ 175 ftL @ 1 V_{pp} input signal
	High voltage regulation	0.2 % max. size change



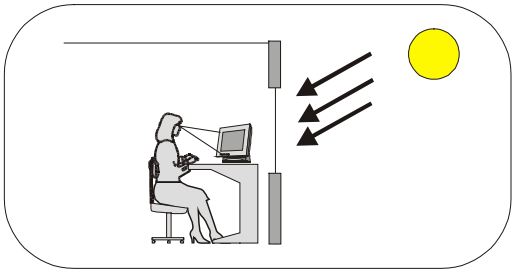
Video Amplifier, Inuts	Bandwidth	140 MHz @ 80 V modulation
	Rise & fall times	3 ns
	Connectors	BNC type
	Impedance	75 Ohms
	Video level	0.75 to 1.2 V_{pp}
	Sync. level	0.1 to 0.6 V_{pp}
Front Panel Controls	Controls	Power on / off, contrast / brightness
	Geometry	H/V-phase, H / V-amplitude, pin & barrel, raster rotation
	Ambient light sensor	For automatic contrast control
Operating Conditions	Temperature operating	+10 °C to +35 °C
	Storage	-25 °C to +70 °C
	Humidity operating	20 % to 80 % rel. humidity
	Storage	20 % to 80 % rel. humidity
Mechanical Specifications	Dimensions (WxDxH)	499 mm x 520 mm x 476 mm
	Weight	≈ 30.5 kg
Approvals	Safety	UL 1950, CSA, IEC 950, EN 60 950, DHHS
	EMC	IEC 601-1-2
	Radiation	MPR II
	Others	CE mark, TÜV-ergo (optional), ISO 9001 certified plant

5.3 Correct Position of Monitors

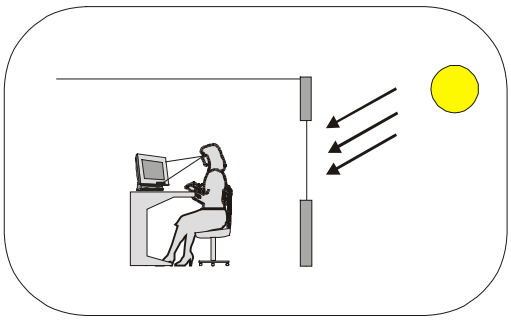
When choosing a site for the ADC QS System, observe the following principles for positioning monitors:

- prefer working parallel to a window.

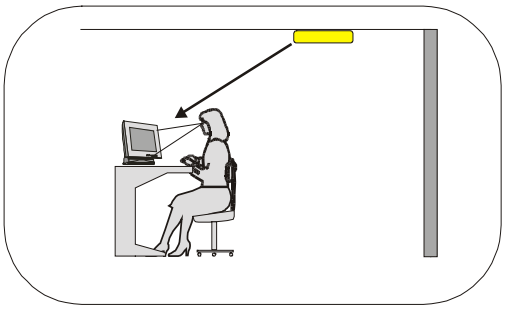
- avoid sitting opposite a window.



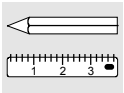
- avoid reflections through direct sunlight.



- avoid reflections from a light source in the room (e.g. lamps, light box).



For detailed information on ergonomic working conditions, please consult the respective local regulations.



6 Installation Planning: Checklist

In order to avoid any unnecessary delays during the installation and the machine start-up, the following points of the checklist below should be carried out prior to the installation.
Check and discuss all the required measures for the installation by means of this checklist. Remarks on the individual items may be made on the back of the list.

We ask you to give this checklist to your local A-G representative then.

Customer: .....

Department: .....

System components: .....

.....

.....

.....

.....

Desired installation date: .....

Signed: .....
Signature

Remarks:

p.t.o.

6.1 Checklist

	Required external connections		Prepared: yes	no
1.	**ID Station**	3 outlets for PC, ID tablet and monitor	☐	☐
		Ethernet connection (twisted pair) prepared, if RIS LINK will be installed	☐	☐
2.	**Client Station**	Ethernet connection (twisted pair) prepared	☐	☐
		2 outlets for PC and monitor	☐	☐
3.	**ADC QS Server Station**	Outlets • minimum 2 outlets for DELL Precision 420	☐	☐
		Ethernet connection (MAU or Twisted pair) prepared	☐	☐
4.	**D**irect **R**emote **A**ccess	Remote access via Service Host must be guaranteed! (telephone line required)	☐	☐
5.	**Hardcopy printer available via network**	See separate Installation Planning Instructions	☐	☐
	General			
		Transport to the installation site, unpacking and removal of the devices from the pallet must be done by the carrier.		
6.	For the connection of the system components to the local network please plan an appointment concerning network configuration with the local network administrator.		☐	☐

7 Form to fill in the Network Parameters

Digitizer	Example	1st Digitizer	2nd Digitizer	Remarks
hostname	adcc1			
ip_addr.	192.9.200.199			
Subnet_mask				
default router				
AE_title	ADCC1			
Station Name *	ADCC1			

ADC QS Server Station	Example	1st Server Station	2nd Server Station	Remarks
hostname	adc_qs			
ip_addr.	192.9.200.202			
subnet_mask				
default router				
AE_title	ADC_QS			
Station Name *	ADC_QS			

ID - Station	Example	1st ID-Station	2nd ID-Station	Remarks
hostname	id207			
ip_addr.	192.9.200.207			
Subnet_mask				
default router				
AE_title	ID207			
Station Name *	ID207			

= main components

ADC QS Client Station	Example	1st Client Station	2nd Client Station	Remarks
hostname	qc206			
ip_addr.	192.9.200.206			
Subnet_mask				
default router				

Hard Copy Printer	Example	1st HCP	2nd HCP	Remarks
hostname	mg1			
ip_addr.	192.9.200.201			
Subnet_mask				
default router				
AE_title	ADC_LR1			
Station Name *	ADC_LR1			

PACS Archive Station	Example	1st Archive Station	2nd Archive Station.	Remarks
hostname	simas1			
ip_addr.	192.9.200.101			
Subnet_mask				
default router				
AE_title	SIMAS1			
Station Name *	IMPAX			

*) Friendly name (Station name) appears in the USER interface

Site filled in by Date

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Glossary / Key Word Index

12

Chapter 12

comprises of two parts:

- Glossary:
  Explanation of special terms and abbreviations
- Key Word Index:
  Alphabetic listing of machine specific terms with reference to the section where this term is explained in detail.

Chapter 12

List of Contents

1 ADC - QS Glossary.....1

1 ADC - QS Glossary

3tier architecture	ADC - QS is based on three different layers. Client (presentation) layer: user interface showing the data. Business Object (Application) layer: contains the business logic. Data layer: stores the data and provides the interface to legacy systems.
ADC	**A**gfa **D**iagnostic **C**enter
ADC - QS	**A**gfa **D**iagnostic **C**enter – **Q**uality **S**ystem
ADC QS Task Manager	ADC QS component to configure, start and stop background tasks (e.g. routing, automatic deletion). It centralizes the management of different tasks like system related tasks (e.g. disk monitoring) and procedure step related tasks (tasks depending on the procedure step status, e.g. print, archive, distribute).
AE-title	**A**pplication **E**ntity Title: used to identify systems/applications within the DICOM protocol.
BOS	Business Object Server. Application on ADC QS which manages the whole image and demographic data by means of a database. The BOS decides where and how to store, retrieve and manipulate data. It is the core of the ADC QS.
Business Object	Everything a certain treatment is done on.
CCM-Tool	software tool to change the cpf-file.
Client Station	ADC QS Viewer to quickly view incoming images (also called Basic QC Viewer).
Collimation	Determination of the region in the image where the interesting data is at. On that region the image processing is applied..
COM/DCOM	**D**istributed **C**ommon **O**bject **M**odel. MS standard software to exchange messages between applications.
COMPAS	**Comp**act **A**pplication **S**erver
Configuration Viewer	ADC QS Viewer to configure and administer the Processing Station
cpf-file	**C**ustomer **P**arameter **F**ile. contains most of the configuration data in table form.
DICOM (protocol)	**D**igital **I**maging and **CO**mmunication in **M**edicine
DICOM Gateway	Application to receive images from CR-Digitizers
DLT – Archive	Tape library to archive images

Healthcare Model	Data model to structure patient and examination data in an hierarchical way in a medical environment.
HIS	**H**ospital **I**nformation **S**ystem
Hostname	Alias name of a device connected to a network.
ID – Viewer	**ID**ENTIFICATION Station
IMPAX	AGFA's PACS (Picture Archiving and Communication System)
Interface	A well defined connecting point for devices and software.
IP - Address	(Internet Protocol Address) The standard method which identifies an internet connected computer.
IPD - Viewer	**I**nteractive **P**rocessing **D**isplay Viewer
Logfile	A file which records messages issued by the applications.
LUT	**L**ook **U**p **T**able
Meta Data	Data about data. Normally, meta data describes how data is to be interpreted by applications. An example for meta data is a mapping file.
multithreaded	term in software language which means that tasks can be split up and then be treated in parallel. The goal is to better use the system resources (e.g. 2 CPUs) and thus speed up the processing of a Sw task.
MUSICA	**MU**LTIPLE **S**cale **I**mage **C**ontrast **A**mplification (Agfa Image Processing)
Near-line Storage	Archive
Network location	In an URL, the unique name that identifies an Internet server. A network location has two or more parts, separated by periods, as in my.network.location. Also called host name and Internet address.
NT Event Viewer	NT – tool to view logged messages. ADC QS uses this tool to log the messages.
NT Task Manager	NT – tool to monitor and kill processes running on a NT – system. In addition you can check the resources of the system.
Object	an object exists of data and methods
On-line Storage	internal hard disks / cache
Oracle	company that provides database software
PPD	**P**ostscript **P**rinter **D**efinition. Defines the capability of a postscript printer.
Pre - Viewer	pulls a specific image automatically out of the server

Preview Monitor	displays the image and the name of the patient. This monitor enables to roughly check whether the exposure was successful.
Print Composer	ADC QS Viewer to create a layout for images to be printed.
Print Spooler	Program which takes care that print jobs are managed in the background
Procedure	In healthcare terms a certain examination on a patient.
Procedure Step	In healthcare terms a substep of a procedure, i.e. a CR exam.
QC – Viewer	**Q**uality **C**ontrol Viewer
RIS	**R**adiology **I**nformation **S**ystem
Rislink	AGFA tool to connect to RIS-Systems.
Selector	Certain View in ADC QS to get an overview or to search for certain studies. This view is either based on character or on thumbnail images or both.
Series	images belonging to a procedure step
Study	same as Procedure Step
Task Agent	comprises 1. Routing Task 2. Print Task 3. DICOM, PPS
TCP	**T**ransmission **C**ontrol **P**rotocol. Internet networking software that controls the transmission of packets of data over the Internet. Among its tasks, TCP checks for lost packets, puts the data from multiple packets into the correct order, and requests that missing or damaged packets be resent. Computers must run TCP to communicate with World Wide Web servers.
TCP/IP	**T**ransport **C**ontrol **P**rotocol / **I**nternet **P**rotocol. Common Protocol for Networks. Used in the Internet
Thumbnail	Iconized image of an original.
UI	**U**ser **I**nterface
UPS	**U**ninterruptible **P**ower **S**upply
W/L	**W**indow and **L**eveling
Worklist	A list that shows the user which studies (Procedure Steps) still have to be done at a certain modality (e.g. CT, MR, CR)
XML	E**x**tended **M**arkup **L**anguage